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ABSTRACT

The purpose of this study was to investigate the effect of compensatory education on selected socially determined intervening variables which may affect the academic growth and performance of a black or white post-high school, pre-college student - a Compensatory Education Student (CES). The study focuses on 3 problems. (1) Is admission of a student into a compensatory education program accompanied by social influences (intervening variables) which are generally negative and strong enough to counteract the benefits of the supposedly more ideal educational setting? (2) Will success in a compensatory education program predict a likelihood of that student achieving a college degree? (3) Does peer group companionship of the individual involved in compensatory education have any bearing upon the individual's success? Answers to these questions were sought by testing 8 hypotheses. This report discusses the related literature and the procedures used for research and analysis; analyzes the data; and presents a summary, conclusions and implications. A bibliography and the questionnaires used are included. (AF)

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THE EFFECT OF A PROGRAM FOR DISADVANTAGED YOUTH DEVELOPING SELF-CONCEPT OF ACADEMIC ABILITY

Grant No. OEG 2-9-420095-1050 (010)

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Office of Admissions & Records
State University College at Buffalo
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CHAPTER I

THE PROBLEM

Introduction

The compensatory education movement for underprivileged, or disadvantaged, youth has had magnanimous growth in the United States in the past decade. In 1960, the President's Commission on National Goals published its final report. Gardner, in the section concerned with national goals in education wrote:

> Ultimately, education serves all of our purposes-liberty,justice, and all other aims- but, the one it serves most directly is equality of opportunity. It is the high road of individual opportunity, the avenue that all may travel. That is why we must renew our efforts to remove barriers of education that still exists for disadvantaged individuals- barriers of poverty, or prejudice, and ignorance. The fulfillment of the individual must not be dependent upon his color, religion, economic status, or place of residence.[1]

The challenge confronting educators today is of vital interest to total population because of the intellectual demands of an ever increasingly complex society. This challenge is decidedly greater for those individuals dealing with underprivileged, or disadvantaged youth- especially the black population.

The challenge of educating underprivileged, or disadvantaged, youth is emphasized to an even greater degree when one reviews the available statistics regarding enrollment in institutions of higher education.

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[1] The President's Commission on National Goals, Goals for Americans (New York: Prentice-Hall, Inc., 1960). p.81.

Degree-credit enrollment in institutions of higher education in the United States has increased tremendously each year since the early 1950's rising from 2,102,000 in 1951 to 6,438,477 in 1966-more than tripling.[1] In 1951, there were nearly 24 college students per 100 persons in the 18-21 age category. By 1966 there were nearly 46 college students per 100 persons in the same age category-almost doubling the number.[2]

However, the total number of blacks enrolled in degree-credit institutions of higher education numbered only 237,939, or 4.32% of the total student population.[3] Regionally, this ranged from a low of .69% in New England to a high of 11.48% in the southeast.[4]

This discrepancy is magnified to an even greater degree if one studies the total census figures for ages 18-21. In 1966 the total approached 17,080,000- 14,917,000 whites and 2,162,000 blacks.[5] Thus, the ratio that exists is approximately seven whites to each black-or 85.5% white and 14.5% black. This means that 42% (6,200,538) of the whites in the 18-21 age group were enrolled in degree-credit institutions of higher education, whereas only 9% (237,939) of the blacks in this same age group were afforded the same opportunity of pursuing higher education. Thus, whites had approximately five times the opportunity of attaining a college education as did the blacks.

According to the latest figures, approximately 24% of white males enter college and over 10% remain to graduate. Whereas, only 10% of the black males enter college and only 3% graduate. The proportion of white and black females entering college with 6.2% of the white females graduating and 3% of the black females graduating.[1]

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[1] K.S.Simon, and W.V.Grant, Digest of Educational Statistics-1967 (Washington: U.S. Dept. of H.E.& W., Office of Education,1967), p.73.

[2] Ibid., p.75.

[3] Ibid.

[4] Ibid.,p.90.

[5] The World Almanac, 1967 (New York: Newspaper Enterprises Associations, Inc.,1966).

Background

The pervading philosophy of the compensatory education movement has been the belief that programs of compensatory education - Headstart, Upward Bound, etc.- would result in a greater magnification of academic performance, personal development, and social adjustment, for the participant than could, or would, take place in the traditional classroom.

Research supporting the above mentioned philosophy has been conducted by Foxworthy[2] and Ihrig.[3] However, Jensen,[4] in his scathing article, contends that many of the assumptions on which compensatory eduactional programs are developed are valid. He argues that IQ is determined much more by genetic make-up,[1] than by environmental influences.[2] Much research today indicates that compensatory education does not sustain continuous academic growth, but academic growth that is temporary and not residual.[3] Additional findings indicated by

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[1] Kenneth Clark, "Education of the Minority Poor-The Key to the War on Poverty," in The Disadvantaged Poor: Education and Employment (Washington,D.C.: Chamber of Commerce of the United States,1966),p.178.

[2] David T.Foxworthy,"Success of Selected Students Having Less Than Normal Minimum Admissions Requirements," Cooperative Research Project #S-203, United States Office of Education.

[3] Maxwell J.Ihrig, "A Study of the Motivation of Students Who Completed the Junior Year of high school and who are members of Socially, Economically, and Culturally Deprived Areas," Dissertation Abstracts,XXVIII (1968), 3559A.

[4] Arthur R.Jensen, "How Much Can We Boost IQ and Scholastic Achievement?", Harvard Educational Review, XXXIX (1969),pp.1-123.

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[1] Jensen cites the following articles by C.Burt for substantiation: "The Evidence for the Concept of Intelligence," *British Journal of Educational Psychology*, XXV (1955),pp.158-177.; "The Distribution of Intelligence," *British Journal of Intelligence*,XXXXVIII (1957)pp.161-175.; "The Inheritance of Mental Ability," *American Psychology*,XIII (1958),pp.1-15.; "Class Difference in General Intelligence," *British Journal of Statistical Psychology*,XII (1959),pp.15-33.; "Intelligence and Social Mobility," *British Journal of Statistical Psychology*,XIV (1961),pp.3-24.; "The genetic determination of differences in intelligence: A study of monozygotic twins reared together and apart," *British Journal of Psychology*, 57 (1966) pp.137-153.; and C.Burt and M.Howard, "The Multifactorial Theory of inheritance and its application to intelligence," *British Journal of Statistical Psychology*,X (1957),pp.99-104.

[2] Jensen cites the following articles for substantiation: K.Davis, "Final Note On A Case of Extreme Isolation," *American Journal of Sociology*, 57 (1947),pp.432-457.; H.M.Skeels and H.B.Dye, "A Study of the Effects of Differential Stimulation on Mentally Retarded Children," *Proceeding Address, American Association of Mental Difficiencies*, 44 (1939),pp.114-136.; H.F.Harlow and G.Griffin, "Induced Mental and Social Deficits in Rhesus Monkeys," in S.F.Osler and R.C.Cooke (eds.), *The Biosocial Basis of Mental Retardation*,(Baltimore, Md.: The John Hopkins Press,1965); and A.R. Jensen, "Social Class and Verbal Learning." in M.Deutsch, I.Katz, and A.R. Jensen (eds.), *Social Class, Race, and Psychological Development*, (New York:Holt, Rhinehart and Winston, 1968),pp.115-174.

[3] See: Janet R.Brown, "An Exploratory Study of Change in Self Concept," *Dissertation Abstracts* , XXVIII (1968) 3990A; U.S. Commission on Civil Rights, *Racial Isolation in Public Schools*, Vol.I (Washington,D.C.: U.S. Government Printing Office,1967),pp.115-140; W.L.Hodges, and H.H.Spicher, "The Effects of Preschool Experiences on Culturally Deprived Children," In W.W. Hartup, N.I. Smothergill (eds.), *The Young Child: Reviews of Research*, (Washington, D.C.: National Association for the Education of Young People,1967),pp.262-289.

Hodges and Spicher[1] greatly concern those committed to compensatory education, and ultimately equality of educational opportunity.

Theoretical Background

The general problem, regarding the entire compensatory education situation considered herewith, the formulation of specific questions and hypothesis, and the discussion of the results are based on, and greatly influenced by, the symbolic interaction theory,[2] and the "Social System" perspective of deviance.[3] Erving Goffman's "On Cooling the Mark Out"[4] provides a unique model for research with those designated as needing compensatory education.

Symbolic Interaction Theory

Symbolic interaction is a theory within the discipline of social psychology,[5] developed by George

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[1] Hodges and Spicher, Ibid.,pp.262-289.

[2] George H.Mead, Mind, Self, and Society (Chicago: University of Chicago Press, 1934). See also Mead's Philosophy of the Present,(Chicago:London Open Court Publishing Company, 1932); and Movements of Thought in the Nineteenth Century,(Chicago: University of Chicago Press,1936).

[3] The original theoretical development is found in Howard S.Becker, Outsiders: Studies in the Sociology of Deviance (Glencoe,Illinois:The Free Press, 1963); Becker, The Other Side:Perspective on Deviance (Glencoe,Illinois: The Free Press,1964); and John I.Kitsuse, "Society Reaction on Deviance Behavior:Problems of Theory and Method," Social Problems,IX (Winter,1962),pp.247-257.

[4] Erving Goffman, "On Cooling the Mark Cut," Psychiatry, (1952),pp. 451-463.

[5] Nelson N.Foote, "Social Psychology," A Dictionary of the Social Sciences, Julius Gould and William L.Kolb (eds.) (New York:The Free Press,1964),p.663 defines social psychology as "...the overlapping portions of psychology and sociology which are particularly concerned with describing and explaining how selves are modified through interaction with others and how their reciprocating behavior is directed accordingly."

Herbert Mead[1] and applied to the educational setting by Wilbur Brookover and his associates.[2] One of the early foundational works for the symbolic interaction theory was put forth by Cooley in 1902.[3] Cooley elaborates upon the process of taking toward ourselves the attitudes of others- this latter became known as the"looking glass hypothesis." Cooley wrote:

> ...social reference takes the form of a somewhat definite imagination of how one's self-that is an idea he appropriates-appears in a particular mind, and the kind of self-feeling one has is determined by the attitude toward this attributed to the other mind. A social self of this sort might be called the reflected on looking glass self.
> A self-idea of this sort seems to have three principle elements. The imagination of our appearance to the other person; the imagination of his judgment of the appearance, and some sort of self-feeling, such as pride or mortification.[4]

This analogy helps one to understand the fact that an individual knows what he is like, in part, by accurately interpreting the reflected attitudes and actions of those about him. Man is highly dependent upon his fellow man for the satisfaction of most of his needs and desires, for this reason he becomes aware of these attitudes, and usually attempts to satisfy them by his behavior.

Of the early contributors to the symbolic interaction theory of self, George Herbert Mead[5] has set forth the most thorough and systematic description.[1] Dai elaborates upon Mead's theory of symbolic interaction by making these observations:

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[1] Mead,op.cit.

[2] Lee Joiner, Wilbur B.Brookover and Edsel Erickson, "Introduction Symposium on Self-Concept and its Relationship to Academic Achievement: A Longitudinal Analysis," American Educational Research Association meeting, Chicago, 1965.

[3] Charles H.Cooley, Human Nature and Social Order (New York: Charles Scribner's Sons, 1902).

[4] Ibid,p.40.

[5] Mead,op.cit.

> The conception of self or roles of a human individual are acquired. An individual is born with only biological needs, but acquires a self in the course of maturation and socialization. But with the growth of self, the needs for security in self-other or inter-personal relations become as important as, and very often more than, the needs for his logical satisfaction. In fact, self-esteem tends to exert an over-all control over all the needs of the individual, biological or otherwise, a serious disturbance of which control may result in varying degrees of anxiety.[2]

However, a more succinct summation of the symbolic interaction theory, as perceived by Mead, is presented by Bernard Meltzer.[3] Meltzer writes:

> The human individual is born into a society characterized by symbolic interaction. The use of significant symbols by those around him enables him to pass from the conversation of gestures which involves direct, unmeaningful response to the overt acts of others to the occasional taking of the roles of others. This role taking enables him to share the perspectives of others. Concurrent with roletaking, the self develops, i.e., the capacity to act toward oneself. Action toward oneself comes to take the form of viewing oneself from the standpoint, or perspective, of the generalized other (the composite representative of others, of society, within the individual), which implies defining one's behavior in terms of the expectations of others. In the process of such viewing of oneself, the individual must carry

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[1] Morton Deutsch and Robert M. Krauss, Theories in Social Psychology (New York: Basic Books, 1965), p.183.

[2] Bingham Dai, "Problems of Personality Development Among Negro Children", N. Clyde Kluckhohn and Henry A. Murray (eds.), Personalities in Nature, Society and Culture,(New York: Alfred A. Knops Inc., 1953), p.560.

[3] Bernard N. Meltzer, The Social Psychology of George Herbert Mead, (Kalamazoo, Michigan: Division of Field Services, Western Michigan Univ., 1959) pp. 25-26.

> on symbolic interaction with himself, involving an internal conversation between his impulsive aspect (the "I") and the incorporated perspectives of others (the "ME".) The mind, or mental activity, is present in behavior whenever such symbolic interaction goes on-whether the individual is merely "thinking" (in the everyday sense of the word) or is also interacting with another individual. (In both cases the individual must indicate things to himself.) Mental activity necessarily involves meanings, which usually attach to, and define, objects. The meaning of an object or event is simply an image of the pattern of action which defines the object or event. That is, the completion is one's imagination of an act, or the mental picture of the actions and experiences symbolized by an object, defines the act or the object. In the unit of study that Mead calls "the act", all of the foregoing processes are usually entailed. The concluding point to be made in this summary is the same as the point with which I began: Mead's concepts intertwine and mutually imply one another. To drive home this important point I must emphasize that human society (characterized by symbolic interaction) both precedes the rise of individual selves and minds and is maintained by the rise of individual selves and minds. This means, then that symbolic interaction is both the medium for the development of human beings and the process by which human beings associate as human beings.

Brookover points out that "...it is not the actual behavior of others which directly determines an individual's actions."[1] But, one must recognize that it is the individual's perception of the expectations and acts of others which most influences one's behavior.

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[1] Wilbur B. Brookover, Edsel L. Erickson & Lee M. Joiner, Self-Concept of Ability and School Achievement, III, Report of U.S. Office of Education Cooperative Research Project No.2831, College of Education, Michigan State University, East Lansing, Michigan, 1967, p.5.

The Social System Perspective of Deviance

Most conventional approaches ask who is the deviant, where did he come from, how did he get that way, and is he likely to continue in that same manner. Deviance, in this instance the underprivileged or deprived individuals, can be studied from a clinical standpoint,one tends to perceive deviance as a quality inherent in a person's being or behavior, and thus focuses attention on the deviant per se.[1] The social system perspective of deviance is viewed as a process of interaction between at least two kinds of people in a complimentary role relationship.[2] In essence one perceived deviance as the product of an interaction process between deviants and non-deviants. Thus, in utilizing this approach one is interested not only in the deviant but also in the non-deviant and the interaction occurring between them.[3]

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[1] Howard S. Becker(ed.), The Other Side:Perspectives on Deviance (Glencoe, Illinois:The Free Press, 1964),p.2. A more complete explanation of the clinical approach can be found in Albert K. Cohen, Deviance and Control (Englewood Cliffs, N.J.:Prentice-Hall, 1966), pp.42-43. Cohen classifies this traditional approach as the "Emphasis on the Actor." This focuses on the personality, "the kinds of people, theories" and asks "what sort of person would do such a thing?" Also see James Bossard, Social Change and Social Problems(New York: Harper & Brothers, 1934), pp. 435-484; Carl Rosenquist, Social Problems(Englewood Cliffs, N.J.:Prentice-Hall, 1940), pp.372-387; Jessie Bernard, Social Problems at Midcentury:Roles, Status, and Stress in a Context of Abundance(New York:Dryden Press, 1957), pp.216-241.

[2] Becker, The Other Side: Perspectives on Deviance, op.cit., p.2.

[3] See Lawrence G. Brown, Social Pathology: Personal and Social Disorganization(New York: F.S.Crofts &Co., 1942), pp.435-484; and Harry C. Bredemeier and Jackson Toby, Social Problems In America: Costs and Casualties in an Acquisitive Society(New York: John Wiley Co., 1960).

In discussing the consequences of the social system perspective of deviance Becker writes:

> One consequence is that we become more interested in the process by which deviants are defined by the rest of society. We do not take for granted, as has sometimes naively been done, that a given action is deviant simply because it is commonly regarded so. Instead, we look to the process by which the common definition arises. That is, with increasing frequency, referred to as the process of labeling. People attach the label "deviant" to others and thereby makes deviants of them.[1]

Furthermore, Becker stressed that:

> ...if we assume, as has often been done, that deviance is somehow a quality of the person committing the deviant act, we are likely to suppose without looking any further into the matter that the person who commits the deviant act is somehow compelled to do so and will continue to do so. On the other hand, if we view deviance as something that arises in interaction with other, we realize that changes in interaction may produce significant changes in behavior.[2]

In general, the study of deviance from the interactionist point of view has four major consequences for research:

(1) The focus of the research is on the interaction process.[3]

(2) The roles of people other than deviants are considered as they are involved in the interaction process.[4]

(3) The consequences for the person to whom the label has been applied is studied. In particular, the individual's self-definition.[5]

(4) A "lack of sentimentality" must characterize the approach, as false impressions fostered by earlier theoretical positions may be corrected. That is, if deviance is viewed as arising from the interaction with others, changes in interaction may produce significant

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[1] Becker, The Other Side: Perspectives on Deviance, op.cit., pp.2-3.

[2] Ibid., p.4.

[3] Cohen, op.cit., pp 102-106.

[4] Becker, The Other Side: Perspective on Deviance, op.cit., p.4.

[5] Ibid., p.3.

changes in behavior.[1]

If educational researchers viewed underprivileged, or disadvantaged children, within this perspective, they would be concerned with others as influences upon the behavior of the underprivileged, or disadvantaged, and the consequences of such a label.

Self and School Learning

Brookover and his colleagues have superimposed Mead's interpretation of human interaction regarding self-concept to the school learning situation. From two precepts Brookover[1] derived four specific hypotheses as a basis for his social psychological conception of school learning. The two precepts are:

(1) Nearly all human beings learn certain expected types of behavior in every society.
(2) The process and organic mechanisms necessary for learning culturally required behavior are not different from the processes and mechanism necessary for learning the types of behavior taught in the classroom.[2]

The derived hypotheses are:

(1) Persons learn to behave in ways that each considers appropriate to himself.
(2) Appropriateness of behavior is defined by each person through the internalization of the expectations of significant others.
(3) The functional limits of one's ability to learn

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[1] Ibid., p.4. Becker's contention is that because of the abstractness of norms, society needs to define deviant behavior in order to establish and maintain boundries of acceptable behavior.

[2] Wilbur Brrokover, "A Sound Psychological Conception of Classroom Learning," School and Society, LXXXVII (1959), pp.84-87.

[3] Ibid.

are determined by his self conception or self image as acquired in social interactions.

(4) The individual learns what he believes significant others expect him to learn in the classroom and other situations.[1]

As a result of much research Brookover and his associates[2] have revised the earlier statements of position. Based on median theory, Brookover[3] states that there are two underlying assumptions and three propositions as the foundation for this theory of school learning. The underlying assumptions are:

(1) ...neither the process nor the organic mechanisms necessary for culturally required behavior are different from the processes and mechanisms for learning the types of behavior taught in the classroom.

(2) ...a student learns to behave in the classroom in ways which he considers appropriate to himself (the definition of self as an object).

The propositions are:

(1) A functional limit of a student's ability to learn in school is set by his "self concept of academic ability."[4]

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[1] Ibid.

[2] Wilbur Brookover and David Gottlieb, A Sociology of Education,(New York:American Book Co.,1964); Wilbur Brookover, Jean LaPere, Don Hamachek, Shailer Thomas, and Edsel Erickson, Improving Academic Achievement Through Students' Self-Concept Enchancement, Cooperative Research Project No. 1636, U.S. Office of Education (East Lansing, Michigan: Bureau of Educational Research Services, College of Education, Michigan State University, 1965); Wilbur Brookover, Ann Paterson and Shailey Thomas, The Relationship of Self-Images to Achievement in Junior High School Subjects, Cooperative Research Project No. 845, U.S. Office of Education (East Lansing, Michigan.:Bureau of Educational Research Services, College of Education, Michigan State University, 1962); and Wilbur Brookover, Edsel Erickson, and Lee Joiner, op.cit..

[3] Ibid., p.44.

[4] Wilbur Brookover and Kenton Schurr, The Effect of Special Class Placement on the Self-Concept-of-Ability of the Educable Mentally Retarded Child, Grant No. 3-7-700052-3099, U.S. Office of Education (East Lansing, Michigan.: Research Publication Services, College of Education, Michigan State University, 1967),p.17.

(2) A student's self-concept of academic ability is acquired in interaction with his significant others through his perception of their evaluations of his academic ability.

(3) A student's self-concept of academic ability is an "intervening variable" between his perceptions of others and his attempts to learn in school.

As noted, each of the above assumptions and propositions are slightly modified versions of theoretical statements made earlier by Brookover.

Brookover and associates, as cited above, have somewhat alleviated two defiencies that result from solely applying Mead's symbolic interaction theory to the study of compensatory education students, or any other student population. Brookover and Schurr[1] note that the two important limitations were that the Mead Theory was developed in absence of any systemic emperical evidence, thus it lacked specificity.[2] And, two, there was no specific reference to school learning per se.

When relating to the compensatory education student, the Brookover theory means that for a compensatory education student to act intentionally to achieve, he must see the task as appropriate behavior or perceive that significant others in his reciprocal role relationship want him to achieve the task. Towne and Joiner[3] point out that "...this model for learning should not be interpreted to mean that biological differences play no role in academic performance." It should also be noted that the self-concept of ability is an intervening variable which mediates between the organic condition of the individual, and sometimes the environmental, and the behavioral outcome. Brookover states:

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[1] Ibid.

[2] Morton Deutsch and Robert Krauss, Theories in Social Psychology, (New York:Basic Books, 1965), p.183.

[3] Richard Towne and Lee Joiner , The Effect of Special Class Placement on the Self-Concept-of-Ability of the Educable Mentally Retard Child, Grant No. 32-32-0410-6001, U.S. Office of Education (East Lansing, Mich.:College of Education, Michigan State University, 1966), p.6.

> ...We believe that the child acquires, by taking the role of the other, a perception of his own ability as a learner of various types of skills and subjects which constitute the school curriculum. If the child perceives that he is unable to learn mathematics or some other area of behavior, this self-concept of his ability becomes the functionally limiting factor of his school achievement. "Functional limit" is the term used to emphasize that we are speaking not of genetic organic limits on learning but rather those perceptions of what is appropriate, desirable, and possible for the individual to learn. We postulate the latter as the limits that actually operate, within broader organic limits, in determining the nature or extent of the particular behavior learned.[1]

By "self-concept-of-ability" Brookover means "...the evaluation one makes of oneself in respect to the ability to achieve in academic tasks in general as compared with others."[2] Brookover states that "self-concept of academic ability refers to behavior in which one indicates to himself (publicly or privately) his ability to achieve in academic tasks as compared with others engaged in the same task."[3] This definition is based upon Mead's conceptualization of self as "...an awareness of and articulation of an internalized social process."[4] It is important to note that this self definition should not be confused with such global "selves" as those of Jersild[1] and Rogers.[2]

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[1] Brookover and Gottlieb, op.cit., p.469.

[2] Brookover, Erickson, and Joiner, op.cit.,p.8.

[3] Ibid.

[4] Lee Joiner et al., "Student Definitions of the Educational Expectations of Others and the Development of Educational Plans: A Longitudinal Study of High School Males," A paper presented at meeting of the American Educational Research Association, Chicago, Illinois (1966), p.1.

Others and School Learning

The theoretical model proposed by Brookover and associates, does take into account the influence of others upon the individual, whether these be regular students or students enrolled in a compensatory education program. But, the model does not predict what changes are expected to occur as a result of interaction, and placement in a compensatory education program. In some ways Goffman's "Cooling The Mark Out"[3] suggests a unique addition.

"Cooling The Mark Out" is an analysis of adapting to failure in role performance by interacting with others. Goffman stresses three ways in which a person can lose a role: he can be promoted out of it, he can abdicate it, or he may be involuntarily deprived of it, and made in return something that is considered as a lesser thing to be. According to Goffman the "cooling process" is one in which others enable the individual to revise his self definition and adapt to his new role. The interactionist model has been applied to studying the effects of higher education on an individual, by Burton Clark.[4] Clark stresses that "certain components of

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[1] Arthur Jersild, In Search of Self, (New York: Bureau of Publications, Teachers College, Columbia University, 1952), pp.9-10.

[2] Carl Rogers, Client Center Therapy: Its Current Practices, Implication and Theory (Boston:Houghton-Mifflin Co.,1951), pp.136-137.

[3] Goffman, op.cit..

[4] Burton R.Clark, "The Cooling-Out Function in Higher Education," Society and Self, Bartlett S.Stoodley ed. (New York: The Free Press,1962),pp.135-146. Also in American Journal of Sociology, (May,1960), pp.569-576.

American higher education perform what may be called the "cooling-out function."[1] This process is specifically designated to bridge the gap between culturally instilled goals and institutionally provided means of realization. Merton states that "aberrant behavior may be regarded sociologically as a symptom of dissociation between culturally prescribed aspirations and socially structured avenues for realizing these aspirations."[2]

Clark notes that an alternative approach to failing unpromising junior college students, and crystalizing a more appropriate self-image, is to side track them, or to engage them in a "cooling-out process."[3]

> This type of student in the junior college is handled by being moved out of a transfer major to a one-or two-year program of vocational, business or semi-professional training. This calls for the relinquishing of his original intention, and he is induced to accept a substitute that has lower status in both the college and society in general.[4]

The "cooling-out process" in one junior college consists of five phases:

(1) Low scores on pre-entrance tests lead poorly qualified students into remedial classes.[5]
(2) Counselors assist the students in choosing proper courses in light of their objectives, test scores, high school records, and test records from previous schools.[6]
(3) A special course designed to assist students in evaluating their abilities, interests, and aptitudes; in assaying their vocational choices in light of this evaluation; and in making

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[1] Ibid., p.569.

[2] Robert K. Merton, "Social Structure & Anomie," in Social Theory and Social Structure (Glencoe, Illinois: The Free Press, 1957), p.134. Also see Herbert H. Human, "The Value Systems of Different Classes: A Social Psychological Contribution to The Analysis of Stratification," in R. Bendix and S.M. Lipsit (eds.) Class, Status & Power: A Reader in Social Stratification (Glencoe, Illinios: The Free Press, 1953). pp. 426-442.

[3] Clark, op.cit., p.572.

[4] Ibid.

[5] Ibid.

[6] Ibid.

educational plans to implement their choices is required of all students.[1]

(4) Poor achievement results in "need for improvement notices" and further conferences with a counselor. This directs the student to more advice and self-assessment.[2]

(5) Finally, poor achievement results in a probationary status. This procedure is not designed to rid the college of a large number of students, but to assist the student to seek an objective at a level on which he can succeed. An important effect is the killing-off of the lingering hope of the most stubborn latent terminal students.[3]

The phases outlined for the "cooling-out process" are also steps taken in a myriad number of compensatory education programs in higher education. Conversely, a more positive process also takes place in compensatory education. One in which reevaluation of role performance takes place through interacting with others and some degrees of success. Two ways in which a person can lose a role, as noted by Goffman, can also be applied to a person gaining a role: namely "he can be promoted out of it, or he can abdicate it."[4]

In essence Brookover and associates[5] tried to prove that self-concept could be enhanced through positive interaction with others. The "Parental Experiment" was utilized to study the effects of working with parents in order to influence students. The "Expert Experiment" was employed to study the effects of formal presentations by a person defined as an "expert" on low-achieving students. Finally, the "Counselor Experiment" attempted to investigate the effects of counseling on low-achieving students.

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[1] Ibid.

[2] Ibid., p.573.

[3] Ibid., p.574.

[4] Goffman, op.cit., p.451.

[5] Wilbur Brookover, Jean LaPere, Don Hamachek, Shailer Thomas, and Edsel Erickson, op.cit..

In the "Parental Experiment" Brookover and associates note that the differences between the experimental, control and placebo groups were not statistically significant.[1] However, Brookover pointed out that "it is concluded that self-concept of ability of low achieving students can be enhanced by working with parents and that this improvement in self-concept will be reflected in improved academic performance. The positive academic performance, on the other hand, does not maintain itself when such treatment is discontinued."[2]

In the "Expert Experiment" it is shown that there are no F ratios significant at the .05 level. This indicates that there are no significant differences among the three groups.[3] Brookover concluded that the "expert" presenting material is not an efficient strategy for increasing either self-concept of ability,or school performance.[4]

Finally, the "Counselor Experiment" pointed out that there was no predicted significant changes either within, or between, the experimental and control groups.[5] However, Brookover concludes that replication of this experiment is in order prior to any definite conclusions.[6]

When the "cooling-out" model of Goffman, and elaborated by Clark, and the "enhancement of self-concept of academic ability" by Brookover and others, is applied to compensatory education programs in pre-school, grade school, high school, and higher education, a positive and negative redifinition of roles takes place. The compensatory education classes would be an interaction situation designed to ease redifinition in both a positive and negative sense.

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[1] *Ibid*., p.97.

[2] *Ibid*., p.100.

[3] *Ibid*., p.122.

[4] *Ibid*., p.124.

[5] *Ibid*., p.157.

[6] *Ibid*., p.162.

Problem Statement

In studying the deprived, or underprivileged, students, whether they be black or white, and the effect of compensatory education upon achievement and self-concept of ability, from the aforementioned perspectives, one would not attempt explanation in terms of direct outcomes. For example, instead of explaining inadequate school performance as a direct result of lack of inate ability, intervening variables[1] which mediate between ability and behavioral outcomes are studied. Brookover and others[2] stress that self-concept of ability can be a "threshold concept." Meaning that self-concept of ability functions to limit the learnings attempted; it does not account for variations in achievement within those limits.

This research focuses upon the assessment of change in selected areas as they relate to the following general problems:

(1) Is admission of a student into a compensatory education program accompanied by social influences (intervening variables) which are generally negative and strong enough to counteract the benefits of the supposedly more ideal educational setting?

(2) Will success in a compensatory education program predict a likelihood of that student achieving a college degree?

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[1] Intervening variable is used in the sense of "... any intervening construct with a maximum amount of operational validity, or direct emperical reference." Melvin H. Marx, "Intervening Variable or Hypothetical Construct," The Psychological Review, LVIII (1951) p.236.

[2] Brookover, Erickson, Joiner, op.cit., p.11.

(3) Does peer group companionship of the individual, involved in compensatory education have any bearing upon the individual's success?

Subsumed under this general problem are the more specific research problems. These are:

(1) What happens to the self-concept-of-ability of students engaged in compensatory education programs?
(2) Who are the significant and academic others of compensatory education students?
(3) Is the change in self-concept-of-ability similar for regularly enrolled students, as it is for compensatory education students?
(4) Do compensatory education students perceive the same significant and academic others as regularly matriculated students?

These questions are important since their answers will supply insight into the social processes which influence success or failure of expensive compensatory education programs for those deemed deprived, or underprivileged. The significance of the research is threefold. Brookover has illustrated that the constructs from the symbolic interaction theory is relevant to understanding the academic achievement of students in regular classes, their application to the compensatory education situation may provide a theoretically based explanation of success or failure of compensatory education students. Two, it explores conditions associated with change in academic self-concept which, if identified, might be altered to facilitate the learning of students enrolled in compensatory education programs. Thirdly, it examines the generality of the basic tenets of Brookover's social theory of learning.

CHAPTER II

OBJECTIVES

General Purposes

The initial intent of this research was to investigate as to whether the self-concept-of-academic ability (hereafter referred to as SCCAA) of a black or white pre-college student (hereto referred to as Compensatory Education Student [CES]) by some type of post-high school compensatory education program. This study also attempts to develop a theorectically based explanation for the less than hoped for academic achievement by those students deemed eligible for a compensatory education program. In particular it proposes:

(1) to investigate the change in SCOAA of black and white post-high school CESs.

(2) to identify the significant others (SO) and academic significant others (ASO) of those black and white post-high school CESs.

It must be stressed that this research is not concerned as to whether the CESs are either normal or abnormal, but with examining the conditions and influences which effect it as a functionally limiting variable in academic achievement.

Hypotheses

Because the predicted order of results is important in the discussion and statement of certain hypotheses, numerical subscripts have been utilized to indicate the passage of time, and also indicates the various times when the schedule was administered.

The subscripts refer to approximate testing dates according to the following schedule:

Subscript	testing date
1	August, 1968
2	May, 1969

The testing schedule is designed to cover a period of time prior to enrollment, but with knowledge of selection, to a compensatory education program through his or her first year in the program. Test I was administered prior to the Ss enrollment to the compensatory education program. Test 2 occurred during the last week of the 1968-1969 school year and prior to final examinations.

The following hypotheses are stated as research hypotheses, not as null hypotheses. When applicable, the hypotheses will be stated in both literary and operational form.

Hypothesis I. The SCOAA of CESs will be characterized by an ascending trend from Test I to Test 2.

H_1: $\text{SCOAA}_1 < \text{SCOAA}_2$

Hypothesis II. The change in SCOAA of CESs will be greater than those of regularly matriculated students (hereafter referred to as RMSs).

Hypothesis III. Those named as SO by CESs do not differ from those named by RMSs.

H_3: SO = SO

Hypothesis IV. Those named as ASO by CESs do not differ from those named by RMSs.

H_4: ASC = ASO

Hypothesis V. The change in SCOAA is greater among those "low" achievement CESs than among those "high" achievement CESs.

H_5: SCOAA low $>$ SCOAA high

Hypothesis VI. When the CES compares himself with a fellow CES there will be little, if any, difference in perceived SCOAA.

H_6: CES (SCOAA) = CES (SCOAA)

Hypothesis VII. When the CES compares himself with a RMS there will be a lesser perceived SCOAA.

H_7: CES (SCOAA) $<$ RMS (SCOAA)

Hypothesis VIII. The change in SCOAA will be greater for those CESs removed from their environment than for those still embraced within the environment.

In addition to the aforementioned hypothesis, a number of questions are also investigated. These are:

(1) Is the level of SCOAA different for black and white CESs?
(2) Is the change in level of SCOAA greater among black or white CESs?
(3) Does the level of SCOAA and change in level of SCOAA differ among the black and white CESs and black and white RMSs?
(4) Are there any changes in the identified ASO associated with compensatory education program placement?

Discussion of Hypotheses

Hypothesis I.

SCOAA is an individual's view of himself compared to other students. Operationally, this is defined as a score on Brookover's General Self-Concept of Academic Scale (see Appendix A).

The ascending trend is predicted on the basis of the theorectical work discussed previously. Briefly, being labelled as a CES, and placed in a compensatory education program is a case of being removed from one role, the terminated high school student, and placed in a higher role, a CES. Through interaction with the other CESs, prospective CESs, and RMSs, the CES will see himself as being as "good" as any other student-compensatory or regularly matriculated ("good" is used in the every-day sense of the word). As this "redifinition of self" takes place the SCOAA of the CES should also rise. It is expected that teachers, parents, and peers play important roles in this "redifinition" process.

Hypothesis II.

Once again, the individual's SCOAA is the student's view, whether he be a CES or a RMS, of himself compared to other students. Operationally, this can be defined as a score, pre-test vs. post-test, on Brookover's General Self-Concept-of-Academic Ability Scale (Appendix A). Briefly, this difference will occur because the CES is removed from a lesser role, the terminated high school student, and placed in a higher role, that of a compensatory education or college student. Whereas, the RMS has not changed roles. He was a college bound high school student and now he is a regular college student.

Hypothesis III.

In the early writings of Cooley and Mead much is made of the "other" and taking the role of the "other" in interpreting the actors self-conception. The concept of the SO originates in the writing of Sullivan.[1] Sullivan refines the "other" or "generalized other" by indicating that there is a selectivity factor of those "others" with whom an actor identifies.[2] Operationally, SO is defined as answers to the question, "Who are the people you feel are important in your life?"

Since "others" are the sources of self definitions, they ~~is~~ an important factor to study from both a Median viewpoint and from a "social system" perspective. This study will attempt to specify who such "others" are, will indicate their relative importance in terms of ranked frequency of mention, and will compare those SOs named by RMSs. The hypothesis of no difference is made on the basis of previous findings.[1]

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[1] Harry Stack Sullivan, Conceptions of Modern Psychiatry: The First William Alanson White Memorial Lectures, (Washington,D.C.: The William Alanson White Psychiatric Foundation, 1947),pp.18-22.

[2] H.Hyman, "The Psychology of Status," Archives of Psychology, No.269, 1942, p.80.

Hypothesis IV

The concept of ASOs attempts to particuliarize the SO of Sullivan by placing it within a stated situation, in this case the college setting. This attempt to determine the sources of a particular definition of self, the definition of the self as a student. Operationally, ASO is defined as response to the question, "Who are the people you feel are concerned about how well you do in school?" This research will make explicit who such ASOs are, will determine their relative importance in terms of frequency of mention, and will compare ASOs named by the CES with those ASOs named by a population of regularly matriculated students.

Hypothesis V

The hypothesized greater increase in SCOAA among "low achievemnet" CES (LACES) versus lower increase in SCOAA of "high achievement" CES (HACES) is based upon the frequency of a one-to-one relationships. Operationally, this can be defined as a score on Brookover's General Self-Concept of Academic Ability Scale (Appendix A) and the classification of a student on the basis of "course work intensity."

Those students classified as LACES are classified because of the greater degree of tutorial and remedial work necessary to bring them up to college level work. Thus, this student realizes greater individual attention and will achieve at a more rapid rate. Those students classified as HACES are classified thus because of the lesser degree of tutorial and remedial work necessary to bring them up to college level. Therefore, this student realizes fewer individual contacts and greater group contacts.

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[1] Richard Morse, Self-Concept of Ability, Significant Others and School Achievement of 8th Grade Students: A Comparative Investigation of Negro and Caucasian Students, M.A. Thesis, Michigan State University, East Lansing, Michigan, 1963.

Hypothesis VI

The hypothesized equality of comparison of SCOAA of a CES with another CES is based upon the theoretical work regarding reference groups and "others". Operationally, this can be defined as a score on the Specific Reference Self-Concept-of-Avademic Ability Scale (Appendix B).

This hypothesized equality is based upon the assumption when one CES compares himself with another CES, the individual considers the other actor as being his equal. Thus, the comparisons are similar.

Hypothesis VII

The hypothesized inequality of comparison of SCOAA of a CES with a RMS is based upon the theoretical work regarding reference groups and others. Operationally, this can be defined as a score on the Specific Reference Self-Concept-of-Academic Ability Scale (Appendix C).

This hypothesized inequality in perceived SCOAA is based upon the assumption that a CES considers the other actor as being somewhat superior, in the everyday use of the word. Furthermore, the CES perceived the goal of regular matriculation, or college student status, as being desirable. Therefore, the perceived evaluation of academic ability will be dissimilar.

Hypothesis VIII

The hypothesized impact of environment on SCOAA upon a CES removed from a negative environment, slum status, and placed in a positive environment, a college campus, is based upon the theoretical work regarding reference groups and "others". Operationally, this can be defined as a comparison of pre-test results on the General Self-Concept-of-Academic Ability Scale (Appendix A) and the Specific Reference Self-Concept-of Academic

Ability Scales (Appendix B and C) with the results attained on the post-test.

This change in SCOAA is based upon the assumption that the CES who changes environment will also change SO and ASO merely because of change of location. The new SO and ASO that the CES associates with are more inclined toward higher education,thus a more positive impact is exerted.

Discussion of Questions

Questions one, two, and three are included in this research because previous studies dealing with SCOAA indicate that there are some basic differences when one considers the race of the respondent. Morse[1] indicates that the mean scores of the SCOAA were significantly greater for the white respondent than the mean scores obtained by the black respondents. Wylie[2] also stresses that blacks make more modest estimates of their ability than do white students and that children of lower socioeconomic levels make more modest estimates of their ability than do children of higher socioeconomic levels. Thus, CES may learn different self-definitions because of his race and according to his socioeconomic level. Similiarly, student status-compensatory or regularly matriculated- may also have a bearing on self-definitions.

Question four is included because from a Median perspective, identifying SOs and changes in who are one's SOs are important concerns to those dealing with CESs. Question five is also included because the identification and change of ASOs is equally important. Since SOs are conceptualized as being the primary sources of self-

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[1] *Ibid.*

[2] Ruth C.Wylie,"Children's Estimates of Their School Work Ability as a Function of Sex,Race & Socioeconomic Level," *Journal of Personality*, XXXI (1963),pp.203-224.

definition, and ASOs are considered to be one's primary sources of academic self-concept, changes in behavior may be explained, in part, as an outcome of changing significant and academic significant others of the CES.

CHAPTER III

RELATED LITERATURE

Philosophical and Theoretical Framework of Compensatory Education

Compensatory education has been practiced on a massive scale for several years in myriad cities throughout the nation.[1] According to Jensen[2] compensatory education had its theoretical sanctions from social scientists with the belief that IQ's and scholastic achievement could be improved. These social scientists espoused the "deprivation hypothesis" notion which basically states that the academic lag of certain students is mainly the result of social, economic, and educational deprivation and discrimination. Deutsch[3] elaborates upon this theory by stating that "the lower-class child enters the school situation so poorly prepared to produce what the school demands that initial failures are almost inevitable." Mendelson, in his summary of the United States Commission on Civil Rights

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[1] Some of the largest and most publicized programs of compensatory education are: The Banneker Project in St. Louis (8yrs.), Higher Horizons in New York City (5 yrs.), More Effective Schools in New York City (3 yrs.), and other large-scale programs in Syracuse, Seattle, Philadelphia, Berkeley, and a score of other cities.

[2] Arthur R. Jensen, "How Much Can We Boost IQ and Scholastic Achievement?", Harvard Educational Review, XXXIX (1969), pp.2-3.

[3] Martin Deutsch, "The Disadvantaged Child and the Learning Process," in Poverty In America, edited by L.A. Ferman, J.L.Kornbluh, and A.Haber,(Ann Arbor, University of Michigan Press, 1968),p.477.

Report, asserts that:

> ...one of the unpleasant facts of life is the gap between the scholastic achievements of the average white and the average negro student. Experience indicates that it increases as pupils advance from grade to grade-that it may represent as much as two years at the high school level."[1]

According to the latest average figures, approximately 24% of white males enter college and over 10% graduate. Only 10% of the black males enter college and approximately 3% of them graduate. The proportion for white females is 17% enter college and 6.2% graduate, whereas for black females it is slightly less than 10% entrance with only 3% graduating.

In studies by Sexton[2] and Clark[3] it is further emphasized that schools in economically deprived areas perpetuate the continuation of this negative growth rate. And, that urban education is one of America's greatest dilemas.

Thus, the primary goal of compensatory education is to remedy the educational lag that exists between disadvantaged students and the growth population, and thereby narrow the achievement gap between "minority" and "majority" students. Ginzberg[1] asserts that it is almost universal to state that the disadvantaged child receives in inferior education.

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[1] Wallace Mendelson, Discrimination. (Englewood Cliffs, N.J.: Prentice-Hall, 1962).

[2] Patricia Sexton, Education and Income (New York: Viking Press, 1961) and "City Schools", in The Annals of the American Academy of Political and Social Science , March, 1964.

[3] Kenneth Clark, "Education of the Minority Poor- The Key to the War on Poverty", in The Disadvantaged Poor: Education Employment(Washington, D.C.: Chamber of Commerce of the United States , 1966),pp.173-188. also see Conant, op.cit., Christopher Jencks, "Education: The Racial Gap", The New Republic, Vol.155, No. 14, Oct.1, 1966, and "Speaking Out: The Public Schools Are Failing", Saturday Evening Post, April 23, 1966.

Two basic theoretical tenets guide most of these compensatory education programs at any educational level- the "average children concept" and the "social deprivation hypothesis."

The "average children concept"essentially states that all children, except for a rare few born with severe neurological defects, are basically much alike in mental development and capabilities. It further asserts that apparent differences in mental development and capabilities in school are due to superficial differences in children's upbringing at home, their preschool and out-of-school experiences, motivations and interests, and the educational influences of their family background.[2] Jensen points out that:

> Children with average or above-average IQ's generally do well in school without much attention. So the remedy deemed logical for children who would do poorly in school is to boost their IQ's up to where they can perform like the majority-in short to make them all at least "average children."[3]

In essence all children are perceived as being more or less homogeneous. But, become heterogeneous because when they are out of school they learn, or fail to learn items ,which may either help of hinder them in their school work.[1]

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[1] Eli Ginzberg, The Negro Potential (New York: Columbia University Press, 1956). Also see Kenneth Clark, Dark Ghetto (New York: Harper & Row, 1965), Robert Hutchins, The Conflict in Education in a Democratic Society(New York: Harper and Row, 1953), Arthur Bestor, Educational Wastelands (Urbana: University of Illinois Press, 1953) and The Restoration of Learning: A Program For Redeeming the Unfulfilled Promise of American Education (New York: Alfred Knopp, Inc., 1955).

[2] This is the basic premise of the Federal program entitled "Head Start."

[3] Jensen, op.cit.. Also see J.M.V. Hunt, Intelligence and Experience (New York: Ronald Press, 1961).

The "social deprivation hypothesis" is the theory whereby those children of ethnic minorities and the economically poor who achieve "below average" in school do so mainly because they begin school lacking certain necessary experiences which are crucial prerequisites for school learning-namely perceptual, attentional, and verbal skills, as well as the self-confidence, self-direction, and attitudes conducive to achievement in the classroom. Thus, the major aim of preschool and compensatory education is to make up for these environmental lacks as quickly and intensively as possible by providing the appropriate experiences, cultural enrichment and training in basic skills.

Self Concept

Self concept has been studied under a myriad number of labels. Among these has been the "self", the "real self", the "phenomenal self", the "looking glass self", the "social self", and a multitude of others. It is beyond the scope of this research to assess and compare the hundreds, perhaps even thousands, of studies undertaken to investigate these labels. Instead, generalizations will be made and more detailed attention will be given to the findings of a few studies related to the research reported herein.

1. Self-concept is an important variable for explaining

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[1] E. Gordon and D. Wilkerson, *Compensatory Education For The Disadvantaged* (New York, College Entrance Board, 1966), pp. 158-159.

the behavior of individuals.[1]

2. An individual's self rating is significantly related to others rating him.[2]

3. The self-concept of an individual can change.[3]

4. When measuring self-concept, Ss reports are more likely to have a positive bias than a negative bias.[4]

5. The individual's self-concept functions to direct his behavior.[5]

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[1] William Fitts, "The Role of Self-Concept in Social Perception," Dissertation Abstracts, XV (1955),p.463; Ernest R.Hilgard, "Human Motives and the Concept of Self," American Psychologist, IV (1949), pp.374-382; Emory Cowen,"An Investigation into the Relationship Between Two Measures of Self-Regarding Attitudes," Journal of Clinical Psychology, XII(1956),pp.156-160.

[2] Frank Miyamotv and Sanford Dornbusch, "A Test of Interactionist Hypotheses of Self-Conception," American Journal of Sociology, XXI(1956),pp.399-403; Malcolm Helper, "Learning Theory and Self-Concept," Journal of Abnormal and Social Psychology, LI(1955),pp.184-194; Richard Videbeck,"Self-Conception and Reaction of Others," Sociometry, XXIII (1960),pp.351-359; Melvin Manis, "Social Interaction and the Self-Concept," Journal of Abnormal and Social Psychology, LI (1955), pp.362-370.

[3] Hugh Perkins, "Changing Perceptions of Self," Childhood Education, XXXIV(1957), pp.2-6; Janet Brown, "An Exploratory Study of Change in Self-Concept," Dissertation Abstracts, (1968),pp.283-284; Eugene Gaier and William White, "Trends in Measurement of Personality," Review of Educational Research,XXXV (1965),pp.63-79; Bernard Borislow, "Self Evaluation and Academic Achievement," Journal of Counseling Psychology, IX (1962),pp.246-253.

[4] M.B.Fink, "Self-Concept as It Relates to Academic Underachievement," California Journal of Educational Research,XIII (1962),pp.57-62; David Russell, "What Does Research Say About Self-Evaluation," Journal of Educational Research, XLVI (1953),pp.561-571; Seth Arsenian,"Own Estimates and Objective Measurement," Journal of Educational Psychology,XXXIII (1942),pp.291-302; Richard Brandt, "The Accuracy of Self-Estimate: A Measure of Self-Concept Reality," Genetic Psychology Monographs, LVIII (1958),pp.55-99.

[5] E.S. Snyder,"Self-Concept Theory," The Clearing House, (1965), pp.242-246; John Kinch,"A Formalized Theory of the Self-Concept," The American Journal of Sociology,LXVIII (1936),pp.481-486.

Of particular interest to the research reported herein have been the studies of school-related self definition of ability reported by Wylie[1], Brookover,[2] and Morse.[3]

Self Concept and Academic Achievement

When concerned with the thought that differences in cultural learning opportunities result in differences in self-concepts concerning one's intellectual abilities, Wylie found:

(1) White girls make more modest estimates of their ability than do white boys.
(2) Negro Ss make more modest estimates of their ability than do white Ss.
(3) Children of lower socioeconomic levels make more modest estimates of their ability than do children of higher socioeconomic levels.[4]

Brookover has investigated the nature of self-concept-of-ability and studied its effects upon the school achievement of a class of white urban students from grade seven through grade twelve. Relevant to the research reported herein are the conclusions of a longitudinal analysis of data from grades seven, eight, nine and ten:

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[1] Ruth Wylie, "Children's Estimates of Their School-Work Ability as a Function of Sex, Race, and Socioeconomic Level," _Journal of Personality_,XXXI (1963), pp.203-224.

[2] Wilbur Brookover _et al_, "Self-Concept of Ability and School Achievement," _op.cit._, Brookover _et al_, "Improving Academic Achievement Through Students Self-Concept Enhancement," _op.cit._.

[3] Richard Morse, _Self-Concept of Ability, Significant Others and School Achievement of Eighth-Grade Students: A Comparative Investigation of Negro and Caucasian Students_, M.A.Thesis, Michigan State University, East Lansing, Michigan,1963; and _Socio-economic Status and Functioning in School: A Symbolic Interactionist Interpretation,_ Ph.D. Dissertation, Michigan State University, East Lansing, Michigan, 1966.

[4] Wylie, "Children's Estimates of Their School-Work Ability as a Function of Sex, Race, and Socioeconomic Level," p.223.

(1) Self-concept of ability is a significant factor in achievement at all levels, seventh through tenth grades.
(2) The perceived evaluations of significant others are a major factor in self-concept-of-academic ability at each grade level, eighth through tenth.
(3) Change or stability in the perceived evaluations of others is associated with change or stability in self-concept.
(4) Change or stability in self-concept-of-ability is associated with change or stability in achievement. The associated change in achievement is noted, however, only over longer periods of time,(3 years).
(5) The relationship of self-concept to achievement is not associated with school attended.
(6) Socioeconomic class has a low relationship to self-concept-of-ability and achievement. Furthermore, the relationship of SES to achievement decreases from grade seven through ten. Change analysis indicated no association between SES and self-concept or achievement.
(7) Self-concept is not merely a reflection of memory of past performance.
(8) There are no consistent sex differences in the relationship of self-concept with achievement.
(9) Self-concept-of-ability is not merely a reflection of memory of how teachers graded in the past, but memory of how teachers graded is more relevant than memory of past performance.
(10) Self-concept is not merely a reflection of past performance.[1]

Morse utilized the data on the black respondents from the Brookover research for a comparative study of self-concept-of-ability and school achievement for black and white students. He concluded that:

(1) The relationship between students' general self-concepts-of-ability and the evaluation they perceived their parents to hold of their abilities were not significantly different among black and white students.
(2) The relationship between the students' general

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[1] Brookover et al, "Improving Academic Achievement Through Students' Self-Concept Enhancement," pp.201-202.

self-concepts-of-ability and the evaluation they perceived their peers to hold of their abilities was significantly greater among white students than among the black students.

(3) The relationship between GPA and measured intelligence was significantly lower among black students than among white students.

(4) The relationship between self-concept-of-ability and GPA was significantly lower for black students than among white students.

(5) The mean scores of white students on perceived evaluations, self-concept-of-ability, grades, and measured intelligence were all significantly greater than the mean scores of black students.

(6) Self-concept-of-ability was a better predictor of classroom achievement than IQ for both black and white students.

(7) IQ was weighted significantly higher as a predictor of achievement among the white students than it was among the black students.[1]

Morse concludes his research by saying that "the black students' conception of his ability to succeed in school and his motivations to do so apparently provide a better basis for forecasting his school achievement than measure of intelligence."[2]

Subsequent research by Morse relevant to socioeconomic status and functioning school allowed him to make the following statements:

(1) To the extent that there is variable functioning in school among pupils with different socioeconomic status, there are parallel differences in the behavior that is viewed as proper, required, necessary, and/or desirable among those pupils. Further, these definitions of appropriate attitudes and behavior are derived from, and reflected in the evaluations and expectations pupils with different socioeconomic status perceive other persons important in their lives to hold of them, and in the pupils' self-concepts.

(2) The fact that variable functioning in school among pupils with different socioeconomic status may, in part, be accounted for in terms of the individual pupil's association with significant others

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[1] Richard Morse, "Self-Concept of Ability, Significant Others and School Achievement of Eighth-Grade Students: A Comparative Investigation of Negro and Caucasian Students," op.cit..

[2] Ibid., p.160.

> does not preclude the probability that the same social-psychological processes may account for variable functioning in school among pupils with similar socioeconomic status. In fact, the results of this investigation supports the conclusion that the same social-psychological influences account for the observable differences in functioning in school among pupils with similar socioeconomic status.[1]

Additional research which may grow out of this study is suggested by Brookover's efforts to enhance the self-concept of low- achieving students:

> It is concluded that the self-concept of ability of low achieving students can be enhanced by working with parents and that this improvement in self-concept will be reflected in improved academic performance.[2]

And, by noted anthropologists Georges and Louise Spindler:

> Children are decisively influenced by the culture of their home and nonschool community. The teacher must identify this culture and understand how it has molded the child's thinking and affected his (or her) ability to learn,then devise effective strategies of instruction in the light of this understanding.[3]

Effects of Compensatory Education On IQ and Achievement

The success of compensatory education is assessed in one or both of two ways: by gains in IQ and/or in scholastic achievement. Jensen maintains that the massive compensatory education programs have produced no appreciable gains in intelligence or achievement, but admits that the majority of small-scale experiments have been successful in boosting the IQ and the scholastic achievement of the disadvantaged child.[1]

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[1] Morse, "Socio-economic Status and Functioning in School: A Symbolic Interactionist Interpretation," op.cit.

[2] Brookover et al, "Improving Academic Achievement Through Students' Self-Concept Enhancement," p.100.

[3] Forward to John Gay and Michael Cole, The New Mathematics and an Old Culture (New York: Holt, Rhinehart, and Winston, 1967), p.vi.

Heber reviewed over 29 intensive preschool programs for disadvantaged children and found they resulted in an average gain of between 5 and 10 points in IQ, with the gain being similar for those children initially below 90 IQ as for those of 90 IQ and above.[2]

The results are more gratifying when the program is extended beyond the classroom into the child's home, and there is intensive instruction in specific skills under short but highly demanding daily sessions. In such a study conducted by Biruter and Engelmann above a third of the children showed gains of as much as 20 points in growth.[3]

Deutsch worked with an intensive preschool program at the Institute of Developmental Studies. The participants, all negro children from a poor New York city neighborhood, were divided into the experimental group (E) and the self-selected control group (Css). The E group received intensive educational enrichment while the Css group received no enriched education. The initial average Stanford-Binet IQs for the E and Css groups were 93.32 and 94.69 respectively. After two years of enrichment the E groups had a mean IQ of 95.53 and the Css groups had 96.52.[4]

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[1] Jensen,1969, op.cit..

[2] R.Heber, Research on Education and Habilitation of the Mentally Retarded, Paper read at conference on Sociocultural Aspects of Mental Retardation, Peabody College, Nashville, Tenn., June, 1968.

[3] C. Biruter and S. Engelmann, An Academically Orientated Preschool For Disadvantaged Children: Results From the Initial Experimental Group. In D.W. Brinson and J.Hill (eds.) Psychology and Early Childhood Education, Ontario Institute for Studies in Education, 1968. No.4, pp.17-36.

[4] F. Powledge, To Change a Child- A Report on the Institute for Developmental Studies, (Chicago: Quadrangle Books, 1967).

Hodges and Spicher[1] have summarized a number of preschool intervention programs designed to improve the intellectual capabilities and scholastic success of disadvantaged students.

The Indiana Project focused on deprived Appalachian white children five years of age, with IQs ranging from 50-85. The children spent one year in a special kindergarten with a structured program designed to remedy diagnosed deficiencies in language development, fine motor coordination, concept formation, and socialization. Evaluation extended over a two year period and was measured against three control groups (regular kindergarten, children who stayed at home during the kindergarten year and children at home in a similar community). The average gain versus the control group was 10.8 IQ points on Stanford-Binet and 4.0 points on the Peabody Picture Vocabulary Test.

The Perry Preschool Project at Ypsilanti, Michigan also was directed at disadvantaged preschool children with IQs ranging from 50 to 85. This program was aimed at remedying verbal prerequisites for first-grade learning. This project involved parental involvement as well as child participation. At the end of one year there was an 8.9 IQ gain on the Stanford-Binet.

The Early Training Project at Peabody College is described as a multiple intervention program, meaning it included not only preschool enrichment but work with the disadvantaged children's mothers to increase their ability to stimulate their child's cognitive development at home. Two experimental groups, with two and three summers of preschool enrichment plus home visits by the training staff, experienced an average gain of 7.2 IQ points over the control group.

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[1] W.L.Hodges and H.H. Spicher, The Effects of Preschool Experiences on Culturally Deprived Children,in W.W. Hartup and N.L. Smothergill (Cds.) The Young Child: Reviews on Research (Washington, D.C.: National Association for the Education of Young Children, 1967), pp.262-289.

Another program, the Durham Education Improvement Program has focused on preschool children from impoverished homes.[1] In introducing the program it maintains that:

> Durham's disadvantaged youngsters are considered normal at birth and potentially normal academic achievers, though they are frequently subjected to conditions jeopardizing their physical and emotional health. It is further assumed that they adapt to their environment according to the same laws of learning that apply to all children.[2]

The IQ gains over an eight to nine months' interval for various groups of preschoolers in the program on a pre-post test basis on three different tests were 5.32 on Peabody Picture Vocabulary, 2.62 on Stanford-Binet, and 9.27 on the Wechsler Intelligence Scale for children.[3]

Karnes[4] whose preschool program at the University of Illinois is based upon an intensive attempt to ameliorate specific learning deficits in disadvantaged three year olds. The group with an average age of between 3 years 3 months and 4 years 1 month showed a gain of 16.9 IQ points on Stanford-Binet, while a control group showed a loss of 2.8 IQ points over the same period. Thus, the net gain was 19.7 IQ points for the experimental groups.

However, an example of what can happen when a small-scale project gets translated into a large-scale program, we can cite Clark's[1] enthusiastic and optimistic description of a "total push" intensive compensatory education program which originated in one school serving disadvantaged children in New York City with initially encouraged results. Clark stated, "these positive results can be duplicated in every school of this type."[2] Clark's successful program was the basis for Higher Horizons program which was implemented in over 40 other New York schools. After three years of the program the children in it showed no gains whatever and even averaged slightly lower than similar children in ordinary schools in achievement and IQ.[3]

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[1] ____________, Durham Educational Improvement Program, 1966-1967 (Durham, N.C., 1967)

[2] *Ibid*., p.iii.

[3] ____________, Durham Educational Improvement Program, Research, 1966-1967(Durham, N.C., 1967).

[4] M.B. Karnes, A research program to determine the effects of various preschool intervention programs on the development of disadvantaged children and the strategic ages for such intervention. Paper read at American Educational Research Association, Chicago, February, 1968.

By and large many of the studies previously cited conclude that growth in IQ and achievement can be realized over a longer period of time. That is to say that change will take place over a short period of time, but meaningful change in either IQ and/or scholastic achievement must continually take place over a period of years.

Perception Of The Compensatory Education Student

One of the basic assumptions of this research is that being labelled as a CES and placed in compensatory education is an instance of being removed from one role and placed in another role, a lesser role, a role having lower status than the role of a regularly matriculated student.

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[1] K.B. Clark, Educational Stimulation of Racially Disadvantaged Children, in A.H. Parson (ed.) Education In Depressed Areas (New York: Teachers College Press, Columbia University, 1963), pp.142-162.

[2] Ibid., p.160.

[3] United States Commission on Civil Rights, Racial Isolation In The Public Schools. Vol.I (Washington, D.C.: U.S. Government Printing Office, 1967), p.125.

To understand the CESs one must review some of the literature pertinent to the black population. For when one discusses compensatory education they are, in a majority of cases, actually speaking of the black population.

It must be remembered that the source of one's self-concept is not internal , it is learned. This learning takes place primarily in the environment of the family, its friends and the peer group. All these groups are restricted in range of impact by social class barriers.[1] Opportunities for social learning are therefore limited by pressure exerted from groups above and below; thus restricting social participation in all facets of society.[2]

The self-concept of the black is further contaminated by the central fact that it is based upon the complex color-caste system. Thus, the black person cannot be unmarked by the experiences of caste discrimination based upon skin color.[3] The self-concept of the black person is damaged by the overwhelming fact that the world in which he lives says, "white is right, black is bad."[4]

In the early drawings, stories, and dreams, black children appear to have wishes of being white.[1] Thus, black children have a more difficult time than white children in racial identification.[2] This identification is also related to color intensity: the darker black is able to see himself as a black earlier than a light-colored one.[3] The impact on the black community is to overvalue all those traits of appearance that are most white. Evidence is clear that in almost every black family, the lighter children are favored by the parents.[4] It is also interesting to note that most of the black leadership group are not black in appearance, many being almost completely white in terms of major physical appearance[5]-however, with the rise of the Black Panthers, the Black Liberation Front and other militant groups this idea of lightness is slowly changing.

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[1] For a complete discussion see R.J. Havinghurst and Allison Davis, "Social Class, and Color Differences in Child Rearing", in Clyde Kluckhohn et al. Personality in Nature, Society and Culture (New York: Knopp Co., 1955), pp.308-320.

[2] Ibid.

[3] Abraham Kardiner and Lionel Ovesey, The Mark of Oppressions: Explorations in the Personality of the American Negro (Cleveland, World Publishing Company, 1962).

[4] Jean D. Grambs," The Self Concept: Basis of Reeducation of Negro Youth" in William Kavaraceus, John Gibson, Franklin Patterson, Bradbury Seasholes and Jean Grambs, Negro Self Concept: Implications for School and Citizenship (New York: McGraw-Hill Book Co., 1965),pp.11-34.

What effect does this all have on the development of a black child's personality. Dai states:

> The personality problems that are more or less peculiar to black children are closely associated with the peculiar social status that their elders are socially and legally compelled to occupy in this society and the peculiar evaluations of skin color, hair texture, and the other physical features that are imposed upon them by the white majority....So far as the personality development of black children are concerned, the most important conditions resulting from living under caste restrictions seem to be the preponderence of lower-

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[1] Arthur Cole and John Dodd, "A Comparison of Negro and White Adolescence, Drawings of A Man and Woman," Negro Educational Review, Vol. XVIII, July, 1967.pp.65-69.

[2] Kenneth Clark and Mamie Clark, "Racial Identification and Preference in Negro Children," in Eleanor Maccoby, et al. (eds.), Readings in Social Psychology (New York: Holt, Rhinehart and Winston, Inc.,1958),pp.602-611.

[3] Ibid., p.605.

[4] Ibid., p.606.

[5] Ibid., p.607.

> class families with their special code of conduct, broken homes accompanied by the dominance of maternal authority, and other physical features. Each of these cultural situations is apt to leave its indelible imprint on the personality of the black child.[1]

The damage to the black child's self-concept appears to be greater among males than females.[2] As previously cited this could well be one of the results of the lack of a strong male influence in many black families.

As a result of the aforementioned facts Kavaraceus indicates that "...it is clear that the life experiences of the black children are not such as to aid him in developing a positive sense of himself or of his place in his worl."[3]

Recent research indicates that black children are responding to their so-called "caste position" by selecting lower goals and lower standards for themselves, even when their family, socio-economic status and innate capabilities would indicate higher achievement motivation.[4]

It is felt that in order to remedy the situation of lack of black motivation and aspirations the life experiences of the blacks must be geared toward developing a more positive sense of himself. Grambs suggests that:

> ...The Negro child, from earliest school entry through graduation from high school, needs continued opportunities to see himself and his racial group in a realistic positive light. He needs to

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[1] Bingham Dai, "Problems of Personality Development Among Negro Children," in Kluckhohn and Murry (eds.), op.cit., p.560.

[2] David and Pearl Ausubel, "Ego Development Among Segregated Negro Children," in A.Harry Passow (ed.), Education In Depressed Areas(New York: Bureau of Publications, Teachers College, Columbia University, 1963),p.113.

[3] Kavaraceus et al., op.cit., p.94.

[4] Albert and Bernice Lott, Negro and White Youth,(New York: Holt, Rhinehart and Winston, Inc., 1963)

> understand what color and race mean, he needs to learn above those of his race who have succeeded, and he needs to clarify his understanding of his own group hisotry and current group situation.[1]

Presently, this recommendation is grossly lacking in the public schools. Textbook studies have shown that the content is lily-white.[2] The pictures that do appear are usually Booker T.Washington, George Washington Carver, or foreign nationals.[3] Trager and Yarrow documents that materials can and do have a strong impact upon the child's perceptions of himself and others. When a story describing a black child as a funny savage (Little Black Sambo)was read aloud to young children, white and black children's feelings were affected, particularly when the white children pointed this out in the schoolyard.[4]

Studies of teachers attitudes toward the children show that the black child is rated lowest in all rankings of groups on a Bogardus type social-distance scale.[5]To show that teachers can make a difference Rosenthal and

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[1] Grambs, op.cit., p.21.

[2] Abraham Tannesbaum, "Family Living In Textbook Town'" Progressive Education, Vol.31, No.5, March, 1954,pp.133-141; Martin Mayer, "The Trouble With Textbooks," Harpers Magazine, Vol.225, July,1952,pp.65-71; Otto Klineberg, "Life is Fun in a Smiling, Fair-Skinned World," Saturday Review., February 16, 1963; Albert Alexander, "The Gray Flannel Cover on the American History Textbook," Social Education, Vol.24, January, 1960, pp.11-14.

[3] Lloyd Marcus, "The Treatment of Minorities in Secondary School Textbooks (New York: Anti-Deformation League of B'rai B'rith, 1961); Jadi Nelson and Gene Roberts Jr., The Censors and The Schools (Boston: Little, Brown and Co., 1963).

[4] Helen Trager and Marian Yarrow, They Learn What They Live and Prejudice in Young Children (New York: Harper and Row Co., 1952).

[5] Jean Grambs, "Are We Training Prejudice Teachers," School and Society, Vol.71, April 1, 1950, pp.196-198.

and Jacobson picked about five children at random from each of the classes in an elementary school and then informed the classroom teachers that, according to test results, the selected children were expected to show unusual intellectual gains in the coming year. Group IQ tests administered by the teachers showed a significantly larger gain in the "high expectancy" students than their classmates.[1]

Neimeyer concludes his discussion by stating:

> ...the chief cause of the low achievement of the children of alienated groups is the fact that too many teachers and principals honestly believe that these children are educable only to an extremely limited extent. And when teachers have a low expectancy level for their childrens' learning, the children seldom exceed that expectation, which is a self-fulfilling prophecy.[2]

Once the child is convinced that the school is irrelevant to his immediate needs and future goals the task of eduaction becomes nearly impossible. Kardiner and Ovesy talked to one junior high school student who had failed all his subjects for two years. The boy stated:

> I don't like it. It seems to bore me. It seems silly just going there and sitting. And most of the time it is so hot and they don't do anything about it and the teachers just talk, talk, and you never learn anything.[3]

Kardiner and Ovesy further state that:

> It is difficult to conceive a more hopeless and despirited group than a high school class of Negro adolescent girls; nor a more bored and resentful group than a high school class of Negro boys.[4]

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[1] R.Rosenthal and L.Jacobson, Pygmalion in the Classroom (New York: Holt, Rhinehart and Winston, 1968).

[2] John Neimeyer, "Some Guideliner to Desirable Elementary School Reorganization," in Programs for Educationally Disadvantaged (Washington,D.C.: United States Office of Education Bulletin, 1963, No.17),p.81.

[3] A.Kardiner et.al., The Psychological Frontiers of Society (New York: Columbia University Press, 1945),p.264.

[4] Ibid., p.72.

Deutsch's research stresses that the lower-class black child receives about one-half to one-third less instructional time in the primary grades than do white children from the same slum environment. He indicates the time samples indicate that as much as 80% of the school day was channeled into disciplining, and secondarily, into ordinary organizational details.[1]

Enhancement of Self-Concept

Can the self-concept of the black child be changed in a positive direction by education? Lott and Lott state that;

> ...we would predict a real change in the level of academic accomplishments among Negroes would be one of the major consequences of a greater availability of Negro models who could illustrate that such achievement 'pays off' and thereby increase the expectation that the Negro youth, too, might reap tangible benefits from his academic labors.[2]

A study by Campbell, Yarrow and Yarrow suggests that an integrated camp experience did have a significant effect on the self-perceptions of children, especially the black children.[3]

Clark and Plotkin point out that when black students are accepted into institutions of higher learning they are more likely to earn a degree than their white peers.

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[1] Martin Deutsch, Minority Groups and Class Status as Related to Social and Personality Factors in Scholastic Achievement (Ithaca: The Society for Applied Anthropology, Cornell University Press, 1960),p.23.

[2] Albert and Bernice Lott, op.cit..

[3] John Campbell, Leon and Marian Yarrow,"A Study of Adaptation to a New Social Situation,"; "Acquisition of New Norms: A Study of Racial Desegregation"; and "Personal and Situational Variables in Adaptation to Change," The Journal of Social Issues, Vol.14, No.1, 1958,pp.3-59.

They indicate that "...the net dropout rate is one-fourth the national one. Fewer than 10% of the black students failed to obtain a degree, while approximately 40% of the white students did not complete college."[1]

Patton states that the Jackman Student Relocation Program voluntarily uprooted 40 black high school students in 1965 and placed them in new homes away from their previous environment. Of the 40 only 1 dropped out of the program, with the 39 now attending colleges.[2]

Recent researches in the area of self-concept enhancement have come to some strong conclusions. Most experimental work has dealt with self-evaluation of abilities with changes in the students self-rating being related to artifially induced "successes" and "failures" in an experimental task.[3]

All investigations conclude that learning is a prime source of individual differences in self-evaluations of all kinds, including self-estimates of academic ability. Like Brookover[4] they have raised doubts as to whether the brief, superficial learning situations provided by the experimental manipulations could be expected to change self-evaluations of abilities that are based on a lifetime of learning. Many institutions that previously ran programs of Upward Bound, SPUR, etc.,in the summer before the student was to enter the instituion, as a result of evaluation, are changing the mode of their program.[1] Many are now making initial contact with the students in the freshman or sophomore year in high school. They state that it seems plausible that long-term cultural learning opportunities could create more positive self-estimates of their ability.

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[1] Kenneth Clark and Lawrence Plotkin, "*The Negro Student at Integrated Colleges*," (New York: National Scholarship Service and Fund for Negro Students,1963),pp.18-19.

[2] Betty Patton, "Would You Go Out of Your Way ? *Concern*, December,1969,pp.18-21.

[3] See R.Howard and L.Bukowitz, "Reactions to the Evaluations of One's Performance," *Journal of Personality*, 1958, Vol.26,pp.494-507; E.Stotland and A.Zander," Effects of Public and Private Failure on Self-Evaluation," *Journal of Abnormal Social Psychology*,1958, Vol.56,pp.223-229; L.Festinger, Jane Torrey and B. Willerman,"Self-Evaluations as a Function of Attraction To The Group," *Human Relations*, 1954, Vol.7, pp.161-174; J.Diggory and D. Magazines, "Self-Evaluations as a Function of Instrumentally Relevant Capacities," *Bulletin de l'Assembly International de Psychological Applications*, 1959, Vol.8.pp.2-19; J.Doris,"Test Anxiety and Blame Assignment in Grade School Children," *Journal of Abnormal Social Psychology*,1959, Vol.58, pp.181-190; J.Doris and S. Sarason,"Test Anxiety and Blame Assignment in a Failure Situation," *Journal of Abnormal Social Psychology*,1955,Vol.50,pp.335-338.

[4] Brookover,et.al., *op.cit.*, pp.209-212

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[1] Brown, op.cit.,pp.283-284.

CHAPTER IV

PROCEDURES

Research Strategy

This research operates within the framework of United States Office of Education Grant No.OEG2-9-420095-1050(010) entitled The Effect of a Program for Disadvantaged Youth Developing Self-Concepts of Academic Ability which is designed as a longitudinal study extended over a period of experimentation. This research utilizes an abreviated version of the "time-series" design put forth by Campbell and others.[1] When the "time-series" design is diagrammed for this research it will look like this: $O_1 x\ O_2$ (O=testing, x=change in condition.) The essence of the "time-series" design in the presence of a periodic measurement process on some group or individual and the introduction of an experimental change into this time-series of measurement, the results of which are indicated by a discontinuity in the measurements recorded in this time series.[2]

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[1] See Donald Campbell, "Factors Relevant to the Validity of Experiments in Social Settings," *Psychological Bulletin*, LIV (1957),pp.297-312; Donald Campbell, "From Description to Experimentation," *Problems in Measuring Change*, ed. Chester Harris (Madison, Wisconsin: University of Wisconsin Press, 1963),pp.212-242; Donald Campbell and Julian Stanley,"Experimental and Quasi-experimental Designs for Research on Teaching," *Handbook of Research on Teaching*, ed. N.L.Gage (Chicago: Rand McNally, 1963),pp.171-246; Joyce Sween and Donald Campbell, "A Study of the Effect of Proximally Autocorrelated Error on Tests of Significance for the Interrupted Time-Series Quasi-Experimental Design," an unpublished manuscript (Northwestern University, 1965); and Joyce Sween and Donald Campbell, *The Interrupted Time Series as Quasi-experiment;Three Tests of Significance*, an unpublished manuscript (Northwestern University, 1965).

[2] Campbell and Stanley, *Ibid*., p.207.

In this partcular research, test one was administered while the Ss were not members of the experimental compensatory education program, but had been selected to become members of the program. The change in condition , enrollment in a compensatory education program, occurred at X. Test two was administered at the end of one year of enrollment in, and usually the conclusion of, the compensatory eduaction program.

This particular experimental design (time-series) typified much of the classical nineteeth-century experimentation in the physical sciences and in biology, but until recently has not been used extensively in educational research.[1]

Campbell and Stanley also outline 12 factors jeopardizing the validy of various experimental design. Fundamental to this listing is a distinction between internal validity and external validity. Internal validity is the basic minimum without which any experiment is uninterpretable: "Did in fact the experimental treatments make a difference in this specific experimental instance?"[2] External validity asks the question of generalizability: "To what populations, settings, treatments, variables and measurements can this effect be generalized?"[3]

Relevant to internal validity, eight different classes of extraneous variables will be presented, They represent the effects of:

1. History, the specific events occurring between the first and second measurement in addition to the experimental variable.
2. Maturation, processes within the respondents operating as a function of the passage of time per se (not specific to the particular events), including growing older, growing hungrier, growing more tired and the like.

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[1] See Towne and Joiner, op.cit., and Schurr, op.cit..

[2] Campbell and Stanley, op.cit., p.175.

[3] Campbell, "From Description to Experimentation," pp. 212-214.

3. Testing, the effects of taking a test upon the scores of a second testing.
4. Instrumentation, in which changes in the calibration of a measuring instrument or changes in the observers or scorers used may produce changes in the obtained measurements.
5. Statistical regression, operating where groups have been selected on the basis of their extreme scores.
6. Biases resulting in differential selection of respondents for the comparison groups.
7. Experimental mortality, or differential loss of respondents from the comparison groups.
8. Selection, maturation, interaction, etc. which in certain of the multiple group quasi-design is confounded with, i.e., might be mistaken for, the effect of the experimental variable.[1]

The four factors jeppardizing external validity or representativeness are:

1. The reactive or interaction effect of testing, in which a pretest might increase or decrease the respondent's sensitivity or responsiveness to the experimental variable and thus make the results obtained for a pretested population unrepresentative of the unpretested universe from which the experimental respondents were selected.
2. The interaction effects of selection biases and the experimental variable.
3. Reactive effects of experimental arrangements, which would preclude generalization about the effects of the experimental variable upon persons exposed to it in nonexperimental settings.
4. Multiple-treatment interference, likely to occur whenever multiple treatments are applied to the same respondents, because the effects of prior treatments are not usually erasable.[2]

Although Campbell accepts the Fisher tradition[3] for interpreting change he also asserts that such conditions are often impossible and unnecessary in practice. What is necessary when there is evidence of change which one wishes to interpret causally is that other plausible, probable and causal explanations be ruled out. The above mentioned classes of frequently plausible rival hypothesis regarding internal validity and external validity are Campbell's answers to the rigidity of the Fisher method.

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[1] Campbell and Stanley, op.cit., p.175.

[2] Ibid., pp.175-176.

[3] See R.A. Fisher, Statistical Methods for Research Workers (London: Oliver and Bond, 1925); and The Design of Experiments (London: Cliver and Bond, 1935).

In analyzing the problems distinct to the time-series design, Campbell states that the designs most definite weahness is its failure to control history. That is, the rival hypothesis exists that not X but some more or less simultaneous event produced the shift.[1] However, Campbell stresses that the researcher could plausibly claim experimental isolation in the sense that he was aware of the possible rival events that might cause such a change and could plausibly discount the likelihood that they explained the effect.[2] Among the possible extraneous stimuli which may be considered a causing change in the experimental instance are: the person doing the data collection, time of day, physical surroundings of the respondents during testing, changes in the weather and season, sex and race of the interviewer, or events surrounding the collection of data. These and other possible historical stimuli are considered in this research.

Maturation and testing are ruled out since they do not plasusibly explain changes occurring between particular observations which did not occur in previous or later time periods. Likewise, there is no plausible reason for expecting instrument error to occur on one particular occasion rather than on earlier ones. Regession effects are usually an orderly function of time and are thus implausible explanations. Selection and mortality are ruled out since coincidences of subject changes do not plausibly explain the effects of X. The time-series design controls all other factors that Campbell considers under external validity.[3]

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[1] Campbell and Stanley, op.cit.,p.209.

[2] Ibid.

[3] Campbell,"From Description to Experimentation," pp.221-223.

Instrumentation

All instruments utilized in this study were originally developed by Wilbur Brookover and his associates for use in his longitudinal study of regular class students, which excluded black respondents.[1] Brookover states that "about 100 Negro students were not included in the present analysis because our preliminary observation indicated that differences on several variables were such that they should be investigated independently."[2] Morse utilized the 100 black respondents and compared their responses to the findings of Brookover and concluded that:

> 1- to the extent that there is varianle functioning in school among pupils with different socio-economic status, there are parallel differences in the behavior that is viewed as proper, required, necessary, and/or desirable among those pupils. Further, these definitions of appropriate attitudes and behavior are derived from, and reflected in, the evaluations and expectations of pupils with different socio-economic status perceive other persons important in their lives to hold of them, and in the pupil's self-concepts.[3]
>
> 2- the fact that variable functioning in school among pupils with different socio-economic status may, in part, be accounted for in terms of the individual pupil's association with significant others does not preclude the probability that the same socila-pyschological processes may account for variable functioning in school among pupils with similar socio-economic status. In fact, the results of this investigation support the conclusion that the same social-psychological influences account for the observable differences in functioning in school among pupils with similar socio-economic status.[4]

The instruments developed by Brookover and others are: General Self-Concept of Ability Scale, Academic Aspirations Scale, Academic Expectation Scale, Significant

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[1] Brookover, Patterson and Thomas, *op.cit.*,p.16.

[2] *Ibid.*,p.18.

[3] Morse,*op.cit*.

[4] *Ibid.*,

Others Test, and Academic Significant Others Test.

An extensive revision of the Brookover scales is not intended in this research. Therefore, the difficulty level of the vocabulary used in the scales was determined prior to their being used with CESs. Towne and Joiner[1] point out that as a result of analysis of the scales, through reference to the Thorndike-Lorge word list,[2] the vocabulary used in the General Self-Concept of Ability Scale were at, or below, the third grade level with the exception of ten words. Of the ten words, seven were at the fourth grade level and the remaining three (high school, advanced, and unlikely) were at the sixth or seventh grade levels. This Thorndike-Lorge analysis leads one to be optimistic regarding the use of the Brookover scales with CESs in testing situations. This conclusion is based upon two factors- the age of the respondents and their reading ability.

For this research the General Self-Concept of Ability Scale (for SCOAA see Appendix A), the Significant Other Test (for SO see Appendix D), and the Academic Significant Other Test (for ASO see Appendix E), were administered prior to the respondents entree into the compensatory education program, and to the regular college. For the post-test there were two modifications in the SCOAA to elicit data with respect to the influence of peers. On Appendix B these directions were added to the SCOAA: "You are now taking some courses in Compensatory Education which are not college credit courses . Answer the following questions as if you were taking compensatory education level courses." And, to Appendix C these directions were added to the SCOAA: "You are now taking some courses that are college credit courses. Answer the following questions as if you were only taking college level courses."

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[1] Towne and Joiner, op.cit., p.63.

[2] Edward Thorndike, and Irving Lorge, The Teachers' Word Book of 30,000 Words (New York: Teachers College, Columbia University, 1944).

Extensive reliability findings regarding the SCOAA scale have been reported previously. Coefficients of reproduciblity of .95 for males and .96 for females were computed for 1050 seventh grade students.[1] Reliability coefficients calculated by Hoyt's Analysis of Variance were .82, .91, .92, and .86 for males and .77, .84, .84, and .84 for females in the seventh, eighth, ninth, and tenth grades.[2] Correlations of .75 for males and .77 for females were reported in one year test-retest study.[3]

Validity studies of the SCOAA scale have also been reported. To test for concurrent validity, correlations were run between the SCOAA scale and the specific subject self-concepts; correlations ranged from .54 to.73.[4] Evidence of construct validity was derived from correlation between the SCOAA scale and perceived evaluation of others. Correlations varied from .60 to .84.[5] Predictive validity was determined by correlating the SCOAA with grade point average correlations ranged from .69 to .72.[6]

Careful administration of the testing schedule was important to this undertaking. All instruments were administered via mail to those RMSs, and per individual contact for the CESs. One must be quite careful for Baratz[7] reports "that black subjects report more anxiety, and less reliability, when tested by a white examiner than when tested by a black examiner." He also indicates that reported anxiety and reliability is subject to the social setting of the test situation. With these factors in mind, administration of the instruments was handled by the Dean of Students of compensatory education in as matter-of-fact fashion as possible.

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[1] Brookover, et.al., op.cit., p.51.

[2] Ibid., p.52.

[3] Ibid.

[4] Ibid., p.55.

[5] Ibid., p.56.

[6] Ibid., p.56-57.

[7] Stephen Baratz, "Effect of Race of Experimentor, Instructions and Comparison Populations Upon Level of Reported Anxiety In Negro Subjects," Journal of Personality and Social Psychology, XII (1967),pp.194-197.

The first testing took place prior to registration in compensatory education, but after actual acceptance into the program. Summer Orientation for CESs was correlated with Orientation for all RMSs. There were seven sessions, each session comprised of approximately 180 RMSs and 30-40 CESs. When the CESs completed registration, for the Fall semester, on the third morning of Orientation they were given the schedule which was to be completed before they concluded the registration process.

The final testing took place during the last week of the semester. Each student came to the compensatory education office to pick up their final slipend. At this time they were asked to complete a schedule and return it to the Dean of Students before leaving the office. If there were any questions regarding the schedule, either in explanation, or of relevance of the test, the questions were answered frankly. It was emphasized that they should answer the questions in relationship to their conceptions and not on what answers they thought the researcher wanted to hear.

The schedules for the RMSs were administered on the same time sequence as the CESs. However, instead of individual contact the schedules were administered via mail.

In order to insure the accuracy of the responses the Ss, compensatory education and regularly matriculated, were given an IBM sheet on which they could record their responses. These sheets were sent through a scanner and punched. The data was then run through the computer in order to check to see if all the responses registered. Those that did not register were pulled and checked. In most instances all the researcher had to do was to darken the responses.

For identification purposes the researcher filled in the identification box. This included an identification number, sex of the Ss, status of the Ss (RMS or CES), the race of the Ss (black or white), their location of residence (home or on campus), and course difficulty.

To divide the subjects academically each type of course was allocated a weighted number. The numerical breakdown of courses registered in is as follows:

Weight	Type of Course
1	tutorial
2	remedial
3	regular course

If a CES subject achieves a numerical rating of 10 or below he will be designated as a "low achievement student (LACES)". If a subject achieves a numerical rating of 11 or over in course difficulty distribution he is designated as a "high achievement student (HACES)". After all this information is added to the Ss IBM sheets this is also punched and verified.

Sample and Sampling Procedure

The population eligible for placement in compensatory education must meet the following guidelines:

Eligibility Requirements

Applicants for admission to the compensatory education program must meet the following requirements:

1. Be a New York high school graduate or hold a New York State High School Equivalency Diploma.
2. Live in a defined poverty area within the county.(OEO Guidelines)
3. Be a citizen of the U.S. or have filed a Declaration of Intent.
4. Be entering college for the first time (no prior college experience).
5. Be highly motivated to attend college.
6. Pocess the potential to succeed in college.

There are no restictions whatsoever regarding age, sex, race, color, religion, marital status, or national origin.

The sample includes only those students who meet the above mentioned requirements and were selected for enrollment in compensatory education for the 1968-1969 academic year- this includes 190 students. In choosing the 190 participants a total of 54 high schools, 30 community agencies and numerous professional and non-professional conferences were visited, with 1317 students and 307 guidance counselors contacted.

Table 4.1 indicates that as a result of these many contacts 1291 applications were received.

Table 4.1 Distribution of Applications Received.

Status of Application	Number
Acceptable	991
Not Meeting OEO Guidelines	300
Total	1291

Upon review, 300 of these applications were considered ineligible for not meeting one or more of the above mentioned criteria. Of those eligible Table 4.2 indicates the decisions rendered with respect to possible acceptance.

Table 4.2 Decisions On Applications Received.

Decisions	Number	%
Accepted	480	.49
"Hold" Status	258	.26
Not Meet Program Standards	38	.04
W/D or Failed to Complete Application	215	.21
Total	991	100.0%

Of those eligible 480, or 49% were accepted, 258, or 26%, were part on a "hold" status;[1] 215, or 21% withdrew their application, or were made inactive for not completing their application; and 38, or .04% were referred.[2]

Although a wide variety of high schools are represented, the geographic area considered is traditionally that of low-incomed or disadvantaged, the age range is wide, the sex distribution includes male and female respondents, and the subjects are both black and white. The sample cannot be considered representative of the typical CES. For instance, students that are academically prepared and capable of achieving a regular college status are not encouraged, in fact discouraged, from applying to compensatory education. Similarly, those who have not achieved in high school, for a sundry variety of reasons, are encouraged to apply to compensatory education. It must also be recognized that there may be schools out of the identified geographic district that follow the same characteristics as those within the district, but because of geographic location are not included.

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[1] Hold status means that the student is acceptable but there is no room at the present time. Should any additional opening become available they will be filled from this group.

[2] Referred means that the student does not meet the minimum standards. These people are referred to vocational counselling for directions as to future possibilities.

Likewise, instead of selecting subjects at random, the researchers accepted for study all students initially placed in compensatory education as a result of identification. However, the lack of randomness does inhibit generalizations since it cannot be claimed that subjects are representative of the compensatory education population in general. But, this research is not totally concerned with generalizing findings at this point. Therefore, the lack of total randomness is not a severe limitation. As Goode and Hatt point out the selecting of subjects by the procedure used above has advantages when attempting to include "...extreme cases, sets of cases which seem contradictory, 'ideal' cases, etc."[1]

Of the 190 students selected for participation in compensatory education the racial analysis indicates that 88% of the students were black and 12% were white. There are more males (56%) than females (44%), and more than half (61%) of the students had been out of school for less than a year before entering compensatory education. Of the remainder, 13% were out of school for one year, 8% for two years, and the balance (185) had been out of school for up to ten years.

Most of the students are single (81%); however, there are more females (33%) who are married than males (8%). Nearly 90% of the single students were living with parents, but virtually all were self-supporting. There were 21% of the students with one or two dependents, while 13% had up to six dependents.

A majority of the students, 59%, come from homes that have an annual family income of between $0000 to $2999. About 22% come from families that have an income of between $3000 and $5999. Another 12% come from homes that have an annual family income of between $6000 to $7499. And finally about 7% come from a family with an annual income of $7500 and over.

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[1] William J. Goode and Paul Hatt, Methods in Social Research (New York: McGraw-Hill Book Co., Inc., 1952), p.92.

Table 4.3 Annual Family Income of CESs.

Family Income	% of Students
0000-2999	59
3000-5999	22
6000-7499	12
7500 and over	7

Of particular interest to any study dealing with self-concept is the educational background of the parents. More mothers (77%) had completed grammar school, but not high school than fathers (53%). About 23% of the fathers were high school graduates while this was true for 30% of the mothers. In general, in only 18% of the instances did the father have a higher educational level; whereas, for 48% of the sample the mothers educational level was higher. The remaining 34% had parents who received a comparable education. Only beyond the high school level is the father's educational level equal to, or more than,the mother. However, the number involved (13) represents only 0.17% of the total sample.

In summary, it might be said that the typical CES for the 1968-1969 academic year was: male ,black, 18 years old, had been out of school less than a year, was living at home but was self-supporting, and had come from a home in which both the mother and father had completed grammar school, but not high school.

Of concern to the researcher is subject mortality. Table 4.4 breaks down the reasons for dropping subjects from the sample. The basic reason for withdrawal from the sample is the fact that the student was not present at the pre and post test situation because they either withdrew from the program or were asked to leave, phased out before completion of the program.

Table 4.4 Reasons for certain subjects not to be included in final analysis.

Reason	Number
W/D from program........	20
Phased Out..............	20
No Pre or Post Test.....	19
Total	59

Finally, for reason beyond the control of this research pre and post tests were not ascertained for certain individuals. Thus, the final example was whittled from 190 to 121.

The final example consists of 50 females, 71 males, 108 blacks, and 13 whites.

Table 4.5 Final Sample of CES by Sex and Race.

Sex	Race	
	Black	White
Male	64	7
Female	44	6

The comparative group, not control group, consists of RMSs selected on a purely random basis.

Table 4.6 Final Sample of Regularly Matriculated Students by Sex and Race.

Sex	Race	
	Black	White
Male	4	3
Female	3	7

This group consists of 7 males and 10 females, as well as 7 blacks and 10 whites.

Of the CESs who entered the program in September, 1968, and have completed the 1968-1969 academic year Table 4.7 indicates their progress.

Table 4.7 Status of EOP Students at the End of One year.

STATUS	NUMBER	PER CENT
Matriculated	150	79.0%
Withdrew	20	10.5%
Phased Out	20	10.5%
Total	190	100.0%

About 79%, or 150 students, matriculated as full-time college students; 10.5%, or 20 students, withdrew from the program; and 10.5%, or 20 students, were phased out of the program.

Methods of Analysis

The conception of factor models as descriptions of patterns of association among statistical variables was originally part of a theory contributed to educational psychology by Spearman.[1] He attempted to explain the observed intercorrelations among mental tests as the effects of general and specific factors of ability. Spearman's theory became a contribution to multivariate statistics when the efforts of Thomson,[2] Burt,[3] Holzinger and Harman,[4] and Thurston,[5] and others to prove or disprove the multivariate theory cultimated in Thurston's multiple factor analysis model. It should be noted that all subsequent statistical developments of the technique of factor analysis depend directly on Thurston's model.[6]

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[1] see C. Spearman, General Intelligence, Objectives determined and measured. American Journal of Psychology, 1904, Vol.15, pp.201-293; Abilities as Sums of Factors, or as Their Products. Journal of Educational Psychology, 1937, Vol.28. pp.629-631; The Proof and Measurement of Association Between Two Things. American Journal of Psychology, 1904, Vol.15.pp.72-101.

[2] G.H.Thomson, The Factorial Analysis of Human Ability (Boston: Houghton Mifflin, 1939).

[3] see C.L.Burt, The Factors of the Mind: An Introduction to Factor Analysis in Psychology (New York:Macmillan, 1941); "Correlation Between Persons," British Journal of Psychology, 1937, Vol.28.pp.59-96; and "The Structure of the Mind: A Review of the Results of Factor Analysis," British Journal of Educational Psychology, 1949, Vol.19. pp.100-111, 176-199.

[4] K.J.Holzinger and H.H. Harman, Factor Analysis (Chicago: University of Chicago Press, 1941).

[5] L.L.Thurston, Multiple Factor Analysis (Chicago: University of Chicago Press, 1947).

[6] M.G. Kendall, A Course in Multivariate Analysis (New York: Hafner, 1957).

Multivariate analysis of variance, like the more familiar univariate analysis of variance, focuses upon differences between groups or between experimental conditions- in the case of this research both groups (Black and White, Male and Female, and Residential and non-Residential) and conditions (regularly matriculated and compensatory education) are considered. In analysis of variance, the matter at issue is that of subjects, with groups defined by the levels of classification of one or more independent variables. It must be noted that multivariate analysis of variance is appropriate to scientific problems of detecting and characterizing differences among experimental groups on many variables simultaneously.

It must also be noted that a multivariate analysis of regression and covariance is particuliarly powerful in allowing conclusions to be reached despite some pre-exerimental differences among groups.[1]

All hypothesis related to self-concept-of academic ability, and significant and academic significant others, will be tested for significance by utilizing the multivariate analysis of variance with planned orthogonal comparisons. Classification factors will be race (White-Black), sex (Male-Female), programs (compensatory education-regular matriculation), and course difficulty (high-low). The distribution of high class score students and low class score students will be disproportionate. A functioning computer program for multivariate analysis of variance with unequal subclass frequencies by lease squares will be utilized. Rejection level will be set at .05 for all hypothesis.

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[1] For a more thorough discussion of multivariate analysis see R.B. Cattell (ed.), Handbook of Multivariate Experimental Psychology (Chicago: Rand McNally and Co., 1966), especially Chapters 7,8,25,and 28; and Dean Whitla (ed.), Handbook of Measurement of Assessment in the Behavioral Sciences (Reading, Massachusetts: Addison-Wesley, 1967).

CHAPTER V

ANALYSIS OF DATA

The results of this investigation relevant to the primary hypothesis and questions identified in Chapter II are presented in this chapter. Since the primary focus of this research is on SCOAA, SOs and ASOs the author first examines the initial relationship to sex, race, and college status. Tests of major hypothesis and questions follow. Unless otherwise indicated this data is based upon information from 138 RMSs and CESs in a eastern state college.

SCOAA By Sex, Race, and College Status Prior To Enrollment in Compensatory Education or Regular College

The SCOAA is an 8 item Guttman Scale with scores of 8.000 indicating that the Ss perceives himself as "POOR", a score of 16.000 indicates an impression of being "BELOW AVERAGE", a score of 24.000 indicates a perception of "AVERAGE", 32.000 indicates that the Ss perceives himself to be "ABOVE AVERAGE", and a score of 40.000 indicates a perception of "SUPERIOR" ability.

Prior to enrollment as either a RMS or a CES in August, 1968, males and females perceived themselves to be equal in mean SCOAA (28.22).

Table 5.1 Mean SCOAA Scores by Sex prior to enrollment.

Male		Female	
Mean SCOAA	N	Mean SCOAA	N
28.22	78	28.22	60

Thus, both males and females view themselves above the "average" category but below the "above average" classification.

When race is taken into consideration the black Ss perceive themselves to be higher in mean SCOAA (28.30) than their white counterparts (27.83).

Table 5.2 Mean SCOAA Scores by Rece prior to enrollment.

Black		White	
Mean SCOAA	N	Mean SCOAA	N
28.22	78	28.22	60

Thus, black Ss and white Ss perceive themselves to be above the "average" category, but below the "above average" classification also.

If college status is considered the RMS scores higher on the mean SCOAA (29.35), than the CES (28.06).

Table 5.3 Mean SCOAA Scores by College Status prior to enrollment.

CES		RMS	
Mean SCOAA	N	Mean SCOAA	N
28.06	121	29.35	19

Once again it can be concluded that both the RMSs and the CESs perceive themselves above the "average" category, but less than the "above average" classification. Thus, males and females, blacks and whites, as well as RMSs and CESs, perceive themselves above the "average" mean score on the SCOAA, but below the "above average" category.

When the variables are combined and interchanged the mean SCOAA ranges from 26.43 in Group 2 (male, white,CES), to 31.33 in Group 7 (female, black, RMS). Group I (male, white, RMS) deviates the least with a SD of 1.15, whereas, Group 3 (male, black, RMS) deviates the most with a SD of 3.11.

Table 5.4 Mean SCOAA Scores by Sex, Race, and College Class Standing Prior to Enrollment.

Group	Variable			Mean SCOAA	N	S.D.
	Sex	Race	Std.			
1	1	1	1	28.67	3	1.15
2	1	1	2	26.43	7	1.62
3	1	2	1	29.50	4	3.11
4	1	2	2	28.31	64	2.47
5	2	1	1	29.14	7	1.95
6	2	1	2	27.50	6	2.51
7	2	2	1	30.33	3	2.08
8	2	2	2	28.02	44	2.11

Key: Sex 1= Male Race 1= white Standing 1= Regular
2= Female 2= black 2= CES

In identifying SOs and ASOs males and females were in much agreement. Both sexes identified parents most frequently as SOs and ASOs.

Table 5.5 Significant Others and Academic Significant Others by Sex prior to enrollment.

	Male		Female	
	SO	ASO	SO	ASO
parents	.85	.83	.88	.77
offsprings	.12	.01	.33	.12
relatives	.47	.35	.62	.37
friends	.41	.36	.60	.48
teachers	.15	.33	.22	.50
spouse	.01	.01	.01	.01
self	.01	.01	.01	.01

However, the intensity ranged from .85 to .88 in the SOs category, and .77 to .83 in the ASOs category. It should be noted that in all cases, with one exception, the Ss perceived each person indentified as a SO to be of lesser importance as an ASO. The exception being the teacher who rose in importance as ASOs.

As was the case when sex was taken into consideration, the same results hold true when identifying SOs and ASOs with race considered.

Table 5.6 Significant Others and Academic Significant Others by Race prior to enrollment.

	White		Black	
	SO	ASO	SO	ASO
parents	.91	.87	.85	.78
offsprings	.22	.13	.21	.01
relatives	.57	.30	.53	.37
friends	.65	.43	.46	.41
teachers	.35	.57	.15	.37
spouse	.01	.01	.01	.01
self	.01	.01	.01	.01

Namely, that parents are the most frequently mentioned SOs (.85-.91), as well as ASOs (.78-.87). And, in each cast the identified individuals lost importance as an ASO, whereas, the teacher gained in frequency of mentioning as an ASO.

When taking college status into consideration the parents still remain as the most frequently mentioned SO (.84-.90), and the most frequently mentioned ASO (.78-.94).

Table 5.7 Significant Others and Academic Significant Others by College Status prior to enrollment.

	Regular		CES	
	SO	ASO	SO	ASO
parents	.90	.94	.84	.78
offsprings	.00	.00	.24	.12
relatives	.82	.53	.50	.33
friends	.82	.59	.45	.39
teachers	.29	.53	.17	.39
spouse	.00	.00	.09	.08
self	.00	.00	.06	.07

Interaction of the variables of sex, race, and college status also indicates that the most frequently mentioned SO by all eight groups is the parent (.67-1.00), and the most frequently mentioned ASO (.67-1.00). Once again it is interesting to note that the teachers category either were as frequently, or more frequently, mentioned as ASOs then for SOs. This fact holds true for all groups.

Table 5.8. Significant Others and Academic Significant Others by Sex, Race, and College Class Standing prior to enrollment.

	1		2		3		4	
	SO	ASO	SO	ASO	SO	ASO	SO	ASO
parents	1.00	1.00	1.00	.86	1.00	.75	.81	.81
offsprings	.00	.00	.14	.14	.00	.00	.13	.09
relatives	.67	.33	.57	.29	1.00	.75	.42	.33
friends	.66	.66	.71	.43	.50	.75	.36	.31
teachers	.33	1.00	.28	.43	.25	.25	.13	.29
spouse	.00	.00	.14	.14	.00	.00	.08	.06
self	.00	.00	.14	.00	.00	.00	.09	.06

cont.

	5		6		7		8	
	SO	ASO	SO	ASO	SO	ASO	SO	ASO
parents	1.00	1.00	.67	.67	1.00	1.00	.89	.73
offsprings	.00	.00	.67	.33	.00	.00	.36	.11
relatives	.71	.29	.33	.33	1.00	1.00	.61	.34
friends	1.00	.43	.17	.33	1.00	.66	.57	.50
teachers	.43	.43	.33	.66	.00	.66	.18	.48
spouse	.00	.00	.17	.17	.00	.00	.11	.09
self	.00	.00	.00	.17	.00	.00	.02	.09.

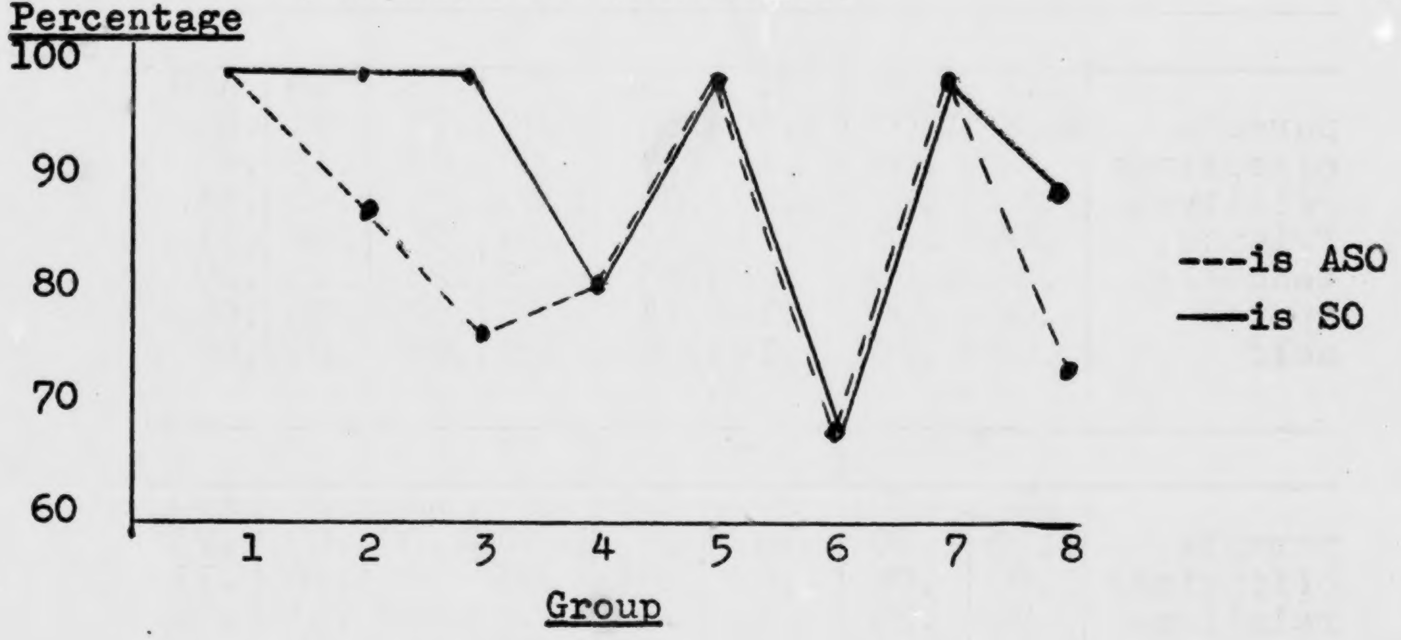
Key:

	Variables			N
	Sex	Race	Std.	
Group 1	Male	White	Reg.	3
2	Male	White	CES	7
3	Male	Black	Reg.	4
4	Male	Black	CES	64
5	Female	White	Reg.	7
6	Female	White	CES	6
7	Female	Black	Reg.	3
8	Female	Black	CES	44

The frequency of choosing parents, offsprings, relatives, friends, teachers, spouse, or self is graphically presented, from the data put forth in Table 5.8, in Figures 5.1-5.8. These graphs take into consideration the frequency of choices as SOs and ASOs of the Ss.

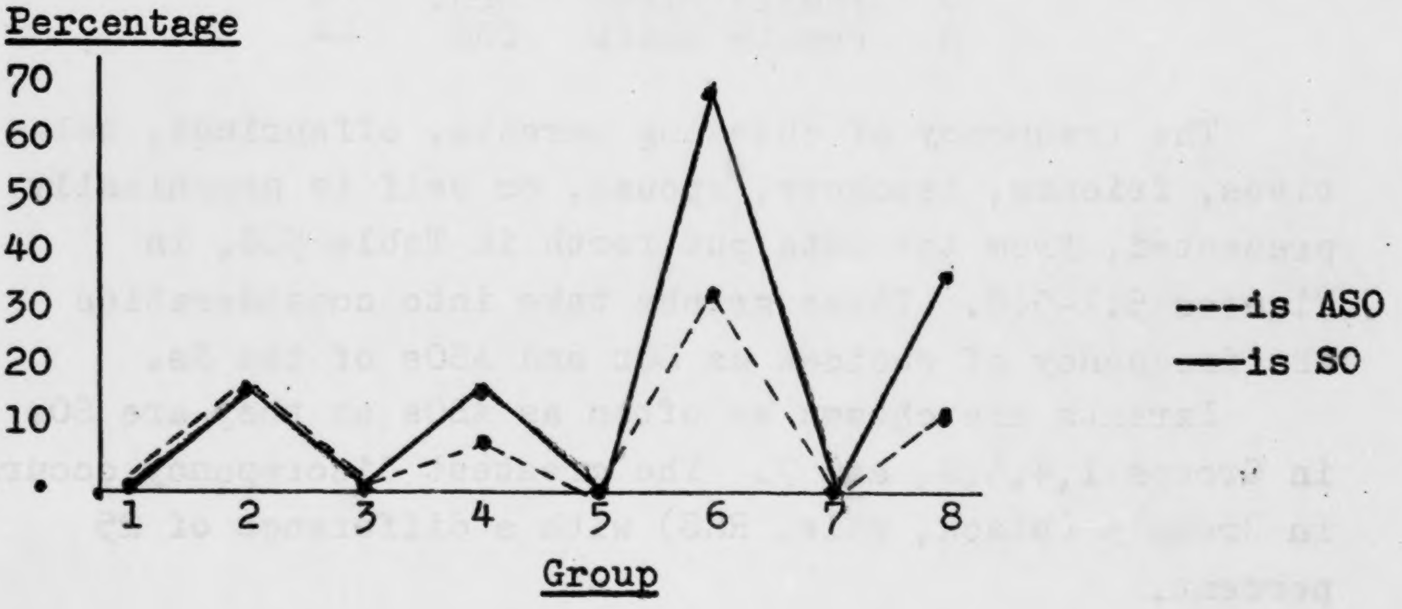
Parents are chosen as often as ASOs as they are SOs in Groups 1,4,5,6, and 7. The greatest discrepancy occurs in Group 3 (black, male, RMS) with a difference of 25 percent.

Figure 5.1 Frequency of Choosing Parents as Significant and Academic Significant Others by Groups 1-8. Prior to enrollment.



Groups 1,2,3,5,and 7 choose offsprings as frequently as ASOs as they choose as SOs, with the greatest difference in frequency of choice appearing in Group 6 (female, white, CES), with a difference of 33 percent.

Figure 5.2 Frequency of Choosing Offsprings as Signficant Others and Academic Significant Others by Groups 1-8. Prior to enrollment.



However, it should be noted that Groups 1,3,5, and 7 are all RMSs, and they did not identify offsprings to be either

SOs or ASOs. It should be noted further that none of the RMSs are married, Thus, they would not have offsprings.

Figure3 illustrates that Group 6 and 7 chose relatives with the same frequency as being both SOs and ASOs. The widest degree of discrepancy appears in Group 5 (female. white, RMS) with 42 percent difference.

Figure 5.3 Frequency of Choosing Relatives as Significant Others and Academic Significant Others by Groups 1-8. Prior to enrollment.

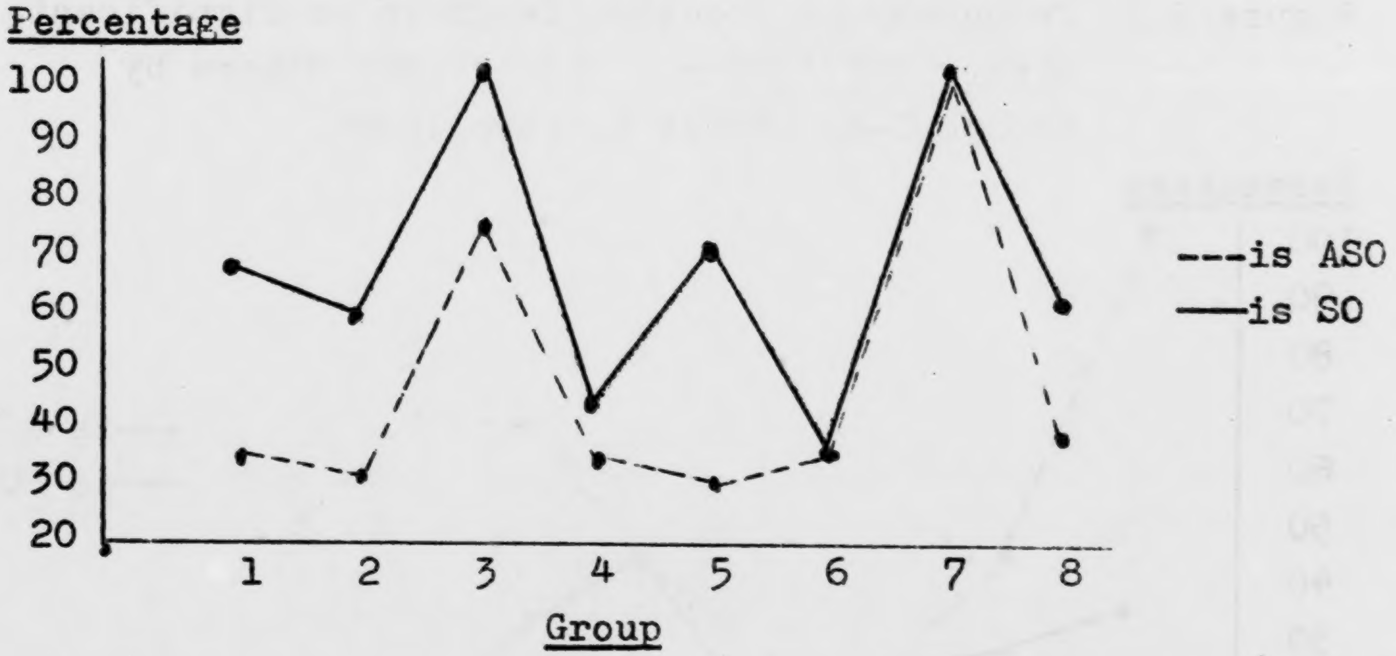
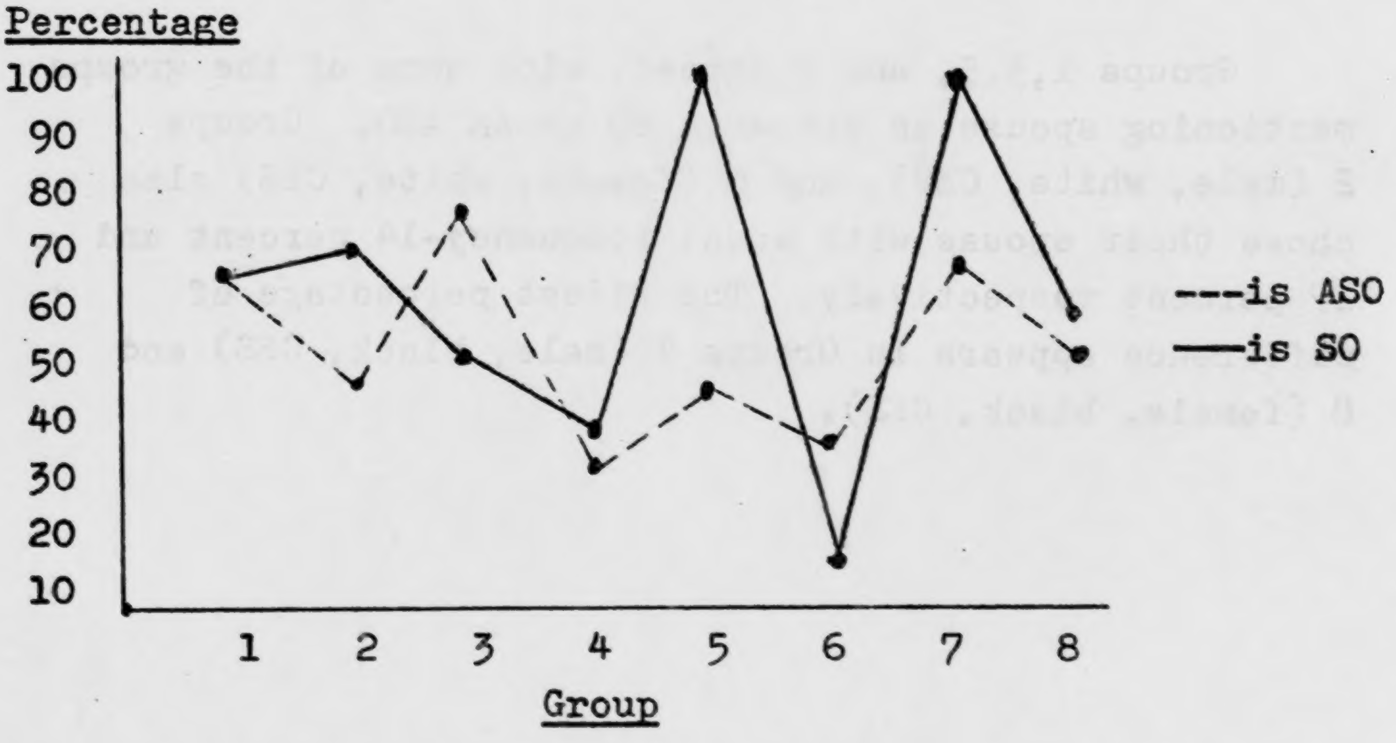


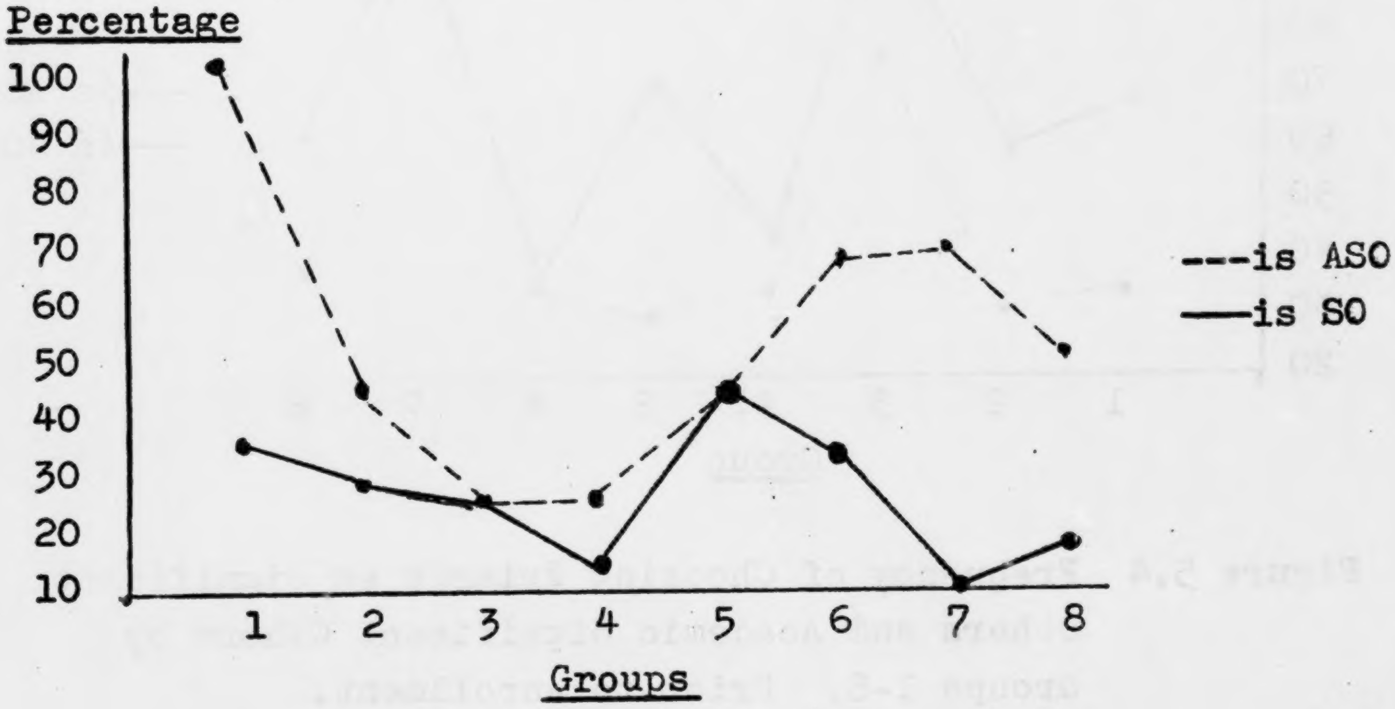
Figure 5.4 Frequency of Choosing Friends as Significant Others and Academic Significant Others by Groups 1-8. Prior to enrollment.



Only Group I (male, white, RMS) chose friends with the same frequency (66 percent) as SOs as they did as ASOs. Group 5 (female, white, RMS) once again had the widest degree of difference (57 percent).

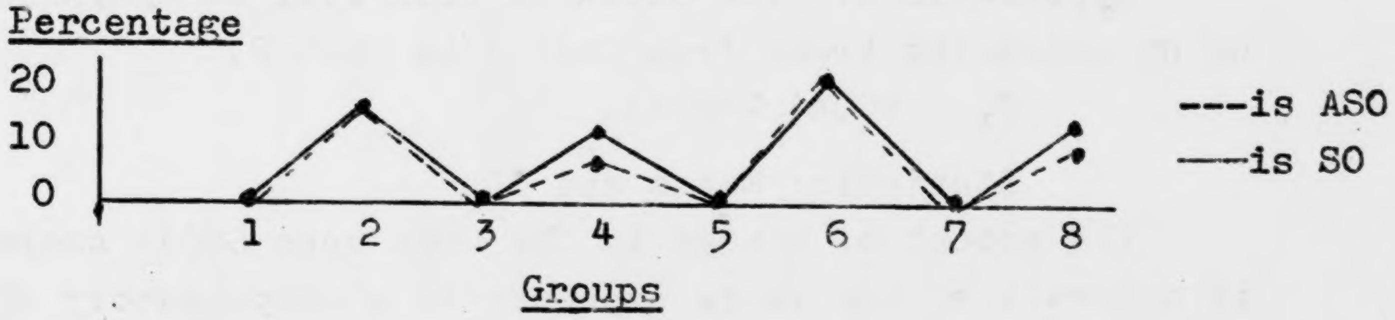
Figure5.5 illustrates that Group 3 (male, black, regular), and Group 5 (female, white, regular) chose teachers with the same frequency as being both SOs and ASOs. The widest degree of discrepancy appears in Group I (male, white, regular) with 67 percent difference.

Figure 5.5 Frequency of Choosing Teachers as Significant Others and Academic Significant Others by Groups 1-8. Prior to enrollment.



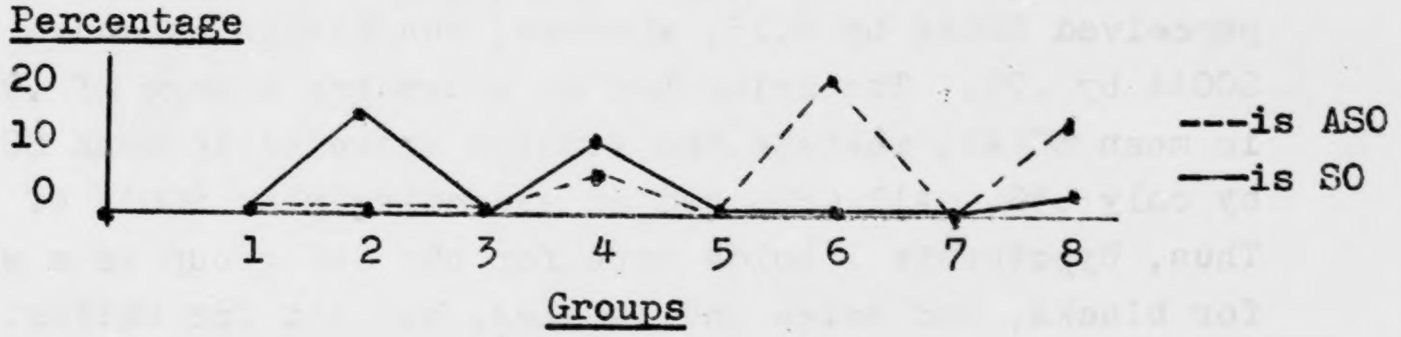
Groups 1,3,5, and 7 agreed, with none of the groups mentioning spouse as either a SO or an ASO. Groups 2 (male, white, CES), and 6 (female, white, CES) also chose their spouse with equal frequency-14 percent and 17 percent respectively. The widest percentage of difference appears in Groups 4 (male, black, CES) and 8 (female, black, CES).

Figure 5.6 Frequency of Choosing Spouse as Significant Others and Academic Significant Others by Groups 1-8. Prior to enrollment.



Finally, Groups 1,3,5, and 7, all RMSs, did not choose themselves to be either SOs or ASOs. It is interesting to note that all CES groups chose themselves as SOs or ASOs. The largest degree of discrepancy is in Group 6 (female, white, CES) with a difference of 17 percent.

Figure 5.7 Frequency of Choosing Self as Significant Others and Academic Significant Others by Group 1-8. Prior to enrollment.



The hypothesis and questions in this research are concerned, for the most part, with impact, or change, in SCOAA, SOs and ASOs, as a result of either regular college enrollment , or enrollment in a compensatory education program. Thus, the following hypothesis will deal with an analysis of the data from a pre to a post testing situation.

Hypothesis

Hypothesis I: The SCOAA of CESs will be characterized by an ascending trend from Test I to Test 2.

$H_1 : SCOAA_1 < SCOAA_2$

Statistic: Means and SDs

The amount of change in the CESs mean SCOAA score as a result of one years exposure to a compensatory education program ranged from-.15 to .92.

Table 5.9 Mean SCOAA Scores of CESs by Race and Sex. Over a One-Year Period.

	N	Pre	Post	Change
CESs	121	28.06	28.75	.69
Black	108	28.19	28.99	.79
White	13	26.92	26.77	-.15
Male	71	28.13	29.06	.92
Female	50	27.93	28.32	.36

The whites enrolled in the program descended in their perceived SCOAA by -.15, whereas, the blacks ascended in SCOAA by .79. The males had an ascending change of .92 in mean SCOAA, whereas,the females ascended in mean SCOAA by only .36. All CESs had an ascending mean SCOAA of .69. Thus, Hypothesis I holds true for the CES group as a whole, for blacks, and males and females, but not for whites.

When the variables are combined one notes that the females, white, CES, is responsible for the -.15 amount of change in the mean SCOAA score of whites-decreasing from 27.500 in the pre test to 26.000 in the post test. It is also interesting to note that the SDs increase considerably from the pre to the post testing situation- ranging from 2.439 to 4.517. Thus, one could assume that the variance of the group increases over time lapsation.

Tables 5.9 and 5.10 indicate further that Hypothesis

I is accepted for all groups with the exception of female,, white, CESs, which descended 1.500 in mean SCCAA.

Table 5.10 Mean SCOAA Scores and SDs When Variables of Sex, Race and College Status are Combined.

GROUP	N	Pre	SD	Post	SD
(male,white,CES)	7	26.429	1.618	27.429	2.439
(male,black,CES)	64	28.313	2.474	29.234	3.027
(female,white,CES)	6	27.500	2.509	26.000	4.517
(female,black,CES)	44	28.023	2.107	28.636	3.004

Hypothesis II: The change in SCOAA of CESs will be greater than those of RMSs.

Statistic: Univariate and Multivariate Analysis of Variance, Covariance and Regression.

$\alpha = .05$

At the outset of the academic year the CES perceived himself to be lower in mean SCOAA than his RMS counterpart by a mean SCCAA of 1.29.

Table 5.11 Change in mean SCOAA scores of RMSs and CESs from Test I to Test 2.

	CES N= 121	RMS N= 17	
Pre Test	28.06	29.35	.005
Post Test	28.75	29.71	.029
Change(Po-Pr)	.69	.36	

d.f.= 2 p less than .0111

The difference in the mean SCOAA for the CES and the RMS is reduced to .96 in the post testing situation. However, the pre testing and post testing mean SCOAA differences between RMSs and CESs are both significant at the .05 level.

When considering the variables of all groups, college status, and race the F ratio for multivariate test of equality of mean vectors indicates that although the changes from Test I to Test 2 in mean SCOAA were significant for all groups combined, the RMS and the CES changed as often or as little. The same holds true for race. Namely, that white and blacks changed with equal frequency and no one race changed more often than the other. Because the F ratio for multivariate test for equality was not significant beyond the .05 level for college status, the null hypothesis could not be rejected in favor of the research hypothesis. Therefore, Hypothesis II is rejected even though the mean SCOAA ascended for both the CES and the RMS.

Table 5.12 Mean Squared, Univariate F and P less than, for all groups, race and college status with respect to change over a period of time.

Variable	Hypothesis Mean Sq.	Univariate F	P less than
all groups	29.3473	6.8125	.0101
race	5.8695	1.3625	.2452
college status	.0111	.0026	.9596

d.f.= 2

Hypothesis III: Those named as SOs by CESs do not differ from those named by RMSs.

H_1: SOs (CES)= SOs (RMSs)

Statistic: Univariate and Multivariate Analysis of Variance, Covariance, and Regression.

$\alpha = .05$

To elicit from the Ss which persons he perceived as SOs Appendix D stated "Who are the people you feel are important in your life?" These responses were grouped into seven categories; parents, offsprings, relatives, friends, teachers, spouse, and self. In both the pre and post testing situation the parents were mentioned most frequently as SOs.

On the pre test there was a significant difference in identifying SOs by RMSs and CESs in the categories of offsprings, relatives, and friends.

Table 5.13 SOs Identified by CESs and RMSs and P less than during pre testing.

	CES(121)	RMS(17)	P less than
Parent	.84	.90	.117
Offspring	.24	.00	.011
Relatives	.50	.82	.007
Friend	.45	.82	.014
Teacher	.17	.29	.716
Spouse	.01	.00	.138
Self	.01	.00	.290

d.f.=14

The CES mentioned offspring significantly more frequently, whereas, the RMS pointed out that relatives and friends were more significant more often. The classification of parents, teachers, spouse and self were not significantly different for RMSs or CESs. There was basic agreement on parents, teacher, spouse and self. However, it must be stressed once again that the RMS did not choose offspring, spouse or self as SOs.

On the post test there was a significant difference in SOs for CESs and RMSs, these differences existed on the SOs of offsprings, relatives, teacher, spouse and self.

Table 5.14 SOs Identified by CESs and RMSs and P less than during post testing.

	CES(121)	RMS(17)	P less then
Parent	.84	.90	.117
Offspring	.24	.00	.011
Relative	.50	.82	.007
Friend	.45	.82	.014
Teacher	.17	.29	.716
Spouse	.01	.00	.138
Self	.01	.00	.290

d.f.=14

The CES more frequently chose the offspring, teacher, spouse and self; whereas, the RMS chose the relative more frequently. There was basic agreement on parents and friends between CESs and RMSs.

The change that occurs during enrollment in the regular college, or compensatory education program, that parents, relatives, friends and spouse did not change significantly from Test I to Test 2.

Table 5.15 Frequency and Change of SOs Identified by CESs and RMSs. Over one year's time.

	CES(121)		RMS(17)		P less than
	Pre	Post	Pre	Post	
Parents	.84	.84	.90	.94	.9122
Offsprings	.24	.40	.00	.00	.0499
Relative	.53	.53	.82	.76	.5594
Friend	.45	.53	.82	.71	.0811
Teacher	.17	.49	.29	.29	.0369
Spouse	.01	.21	.00	.00	.3851
Self	.01	.61	.00	.00	.0001

However, there were significant changes in offspring, teachers and self. All these changes were for CESs, with offsprings increasing from .24 to .40, teachers increasing from .17 to .49, and self increasing from .01 to .61.

When the SOs are ranked according to frequency of choice by CESs and RMSs at the pre and post testing situation parents, relatives, and friends appear in 1,2,3 order for both groups during both testing times.

Table 5.16 Ranking of SOs Identifed by CESs and RMSs at Pre and Post Testing.

CES		RMS	
Pre	Post	Pre	Post
parents	parents	parents	parents
relatives	relatives	relatives	relatives
friends	friends	friends	friends
offspring	teachers	teachers	teachers
teachers	offspring		
spouse	self		
self	spouse		

Teachers rank as fourth most important for the RMS during both pre testing and post testing, but rank fifth for the CES at pre testing and fourth during post testing. It should be noted that offsprings, self, and spouse are not ranked in either the pre or post testing situation for RMSs, because these were never chosen as SOs.

Hypothesis III is rejected because the RMSs never indicated that offsprings, spouse or self as SOs and more frequently identify parents, relatives and friends as SOs than do CESs. Whereas, because of the variable of marriage, the CESs indicate offsprings, spouse and self as SOs more often than RMSs. There is agreement between RMSs and CESs on the categories of parents, relatives, friends, and teachers. Thus, Hypothesis III does hold true at the .05 level for parents, relatives, friends, and teachers, but not for offsprings, spouse and self.

It is encouraging to note that from the pre to the post testing situation the CES identified the teacher 32 percent more often after a year's exposure to compensatory education.

Hypothesis IV: Those named as ASOs by CESs do not differ from those named by RMSs.

H_4: ASO(CES) = ASO(RMS)

Statistic: Univariate and Multivariate Analysis
of Variance, Covariance, and Regression.
$\alpha = .05$

To elicit from the Ss which persons they perceived ASOs Appendix E stated "Who are the people you feel are concerned about how well you do in school?" These responses, as in Hypothesis III, were grouped into seven categories; parents, offsprings, relatives, friends, teachers, spouse and self. Once again in the pre and post testing situation the parents were most frequently mentioned as ASOs by RMSs and CESs.

On the pre test there was a significant difference in identifying ASOs by RMSs and CESs in the category of relatives.

Table 5.17 ASOs Identified by CESs and RMSs and P less than during Pre testing.

	CES(121)	RMS(17)	P less than
Parents	.78	.94	.198
Offspring	.12	.00	.063
Relative	.33	.53	.040
Friend	.39	.59	.108
Teacher	.39	.53	.672
Spouse	.01	.00	.139
Self	.01	.00	.292

The RMS mentioned relative significantly more frequently than the CES. There was a strong agreement on teachers being ASOs by both the CES and the RMS. With agreement, in varying degrees, between CES and RMS on the categories of offsprings, friends, spouse, self, and parents. It must be stressed that the RMS did not choose offspring, spouse, or self as ASOs.

The post test evidenced a significant difference in ASOs for RMSs and CESs in the category of self. The RMS more frequently chose, but not significantly, the parent, teacher, relative, and friend; whereas, the CES frequently chose offspring, spouse and self. There was basic agreement between the CES and the RMS in identifying teachers as ASOs.

Table 5.18 ASOs Identified by CESs and RMSs and P less than during post testing.

	CES(121)	RMS(17)	P less than
Parent	.73	.94	.148
Offspring	.19	.00	.055
Relative	.40	.47	.167
Friend	.40	.59	.117
Teacher	.44	.47	.921
Spouse	.16	.01	.437
Self	.55	.00	.001

The change that occurs during enrollment in the regular college, or compensatory education, that parents, offsprings, relatives, friends, teachers, and spouse did not change significantly from Test I to Test 2. However, there was a significant change for CESs in the category of self from .01 in the pre test to .55 in the post test.

Table 5.19 Frequency and Change of ASOs Identified by CESs and RMSs over one year's time.

	CES(121)		RMS(17)		P less than
	Pre	Post	Pre	Post	
Parent	.78	.73	.94	.94	.839
Offspring	.12	.19	.00	.00	.724
Relative	.33	.40	.53	.47	.593
Friend	.39	.40	.59	.59	.975
Teacher	.39	.44	.53	.47	.783
Spouse	.01	.16	.00	.01	.766
Self	.01	.55	.00	.00	.001

When the ASOs are ranked according to frequency of choice by CESs and RMSs at the pre and post testing situations parents always rank first, and teachers always rank third.

Table 5.20 Ranking of ASOs by CESs and RMSs at Pre and Post Testing..

CES(121)		RMS(17)	
Pre	Post	Pre	Post
Parent	Parent	Parent	Parent
Friend	Self	Friend	Friend
Teacher	Teacher	Teacher	Teacher
Relative	Relative	Relative	Relative
Offspring	Friend		Spouse
Spouse	Offspring		
Self	Spouse		

Friends rank second in importance to the RMS on both the pre and the post test and rank second on the pre test and fifth on the post test for CESs. Once again it should be noted that the RMS did not choose offspring or self and spouse only appears in the post testing situation.

Hypothesis IV is rejected because the RMSs never indicated that offspring or self was an ASO; and, only infrequently mentioned spouse as an ASO. There is agreement on parents, relatives, friends, and teachers in ranking but not in the frequency of choice. Thus, Hypothesis IV does hold true for the categories of parents, relatives, friends, and teachers but not for offsprings, spouse, and self.

Hypothesis V; The change in SCOAA is greater among those "low" achievement CESs than among those "high" achievement CESs.

H_5: SCOAA low $>$ SCOAA high

To classify a CESs as a "high" (HACES) or a "low" (LACES) achievement student the researcher examined the degree tutorial, remedial, and regular college enrollment. Each type of instruction was weighted as follows:

Weight	Type of Instruction
1	tutorial
2	remedial
3	regular college

Those students classified as LACES are classified in this manner because of the greater degree of tutorial and remedial work necessary to bring them up to college level (a weighted score of 11 or below classified a student as LACES). Those students identified as HACES are classified thus because of the lesser degree of tutorial and remedial work necessary to bring them up to college level (a weighted score of 12 or more categorized a student as HACES).

At the pre testing there was a significant difference in the mean SCOAA scores of the HACES and the LACES, with the HACESs having a significantly higher mean SCOAA than the LACESs. However, at the post testing situation there was no significant difference in mean SCOAA. The LACES had increased 1.00 in mean SCOAA from the time between Test I and Test 2; whereas, the HACES had only increased his mean SCOAA by .42.

Table 5.21 Change in Mean SCOAA scores for HACESs and LACESs from Test I to Test 2.

	HACES(64)	LACES(57)	P less than
Pre	28.42	27.65	.039
Post	28.84	28.65	.597
Change	.42	1.00	

Table 5.22 indicates that the change for all groups was significant.

Table 5.22 Mean Squared, Univariate F and P less than for all groups, race, level, and college status from Test I to Test 2.

Variable	Hypothesis Mn.Sq.	Univariate F	P less than
all groups	58.3140	6.4186	.0127
race (B-N)	10.4751	1.1530	.2852
level (Hi-Lo)	8.9118	.9809	.3241
college status (RMS-CES)	.1261	.0139	.9065

However, when the variables of race, level, and college status at the end of one term are considered it is found that no group changed more frequently than the other-race, level, or college status.

The mean SCOAA for Groups 1-8 indicate that the greatest possible change took place in Group 8 where the black LACES showed an increase of 1.27 in mean SCOAA from the pre to the post testing situation. The greatest change in mean SCOAA appeared in Group 2 white HACES, who had a change of -3.50 in mean SCOAA. This may be due to the fact that although the white HACES believed he would become a RMS at the end of the semester he did not become a RMS. It should be noted that Groups 1,3,5, and 7 are all groups of students who enrolled as a RMS at the end of one semester.

Table 5.23 Change in mean SCOAA scores when the variables of race, level and college status are combined.

GROUP	N	Pre	Post	Change
(1)white,high,RMS	6	27.83	28.00	.17
(2)white,high,CES	2	25.00	21.50	-3.50
(3)white,low,RMS	0			
(4)white,low,CES	5	26.60	27.40	.80
(5)black,high,RMS	17	30.23	31.11	.88
(6)black,high,CES	39	27.89	28.35	.46
(7)black,low,RMS	10	27.80	27.80	.00
(8)black,low,CES	42	27.83	29.00	1.27

Of the 33 that were formally CESs and who became RMSs at the end of one semester 23 of these were HACES and only 10 were LACES, it can also be stated that 6 who became RMS were white and 27 were black.

Thus, Hypothesis V is rejected because there was no significant change in mean SCOAA on the basis of level. However, it must be stressed that the mean SCOAA, from the pre to the post testing situation changed 1.00 for the LACES and only changed .42 for the HACES. It must be noted that although there was no significant change on the basis of level, race, or college status at the end of one term, there was a significant change in the mean SCOAA for all groups.

Hypothesis VI: When the CES compares himself with a fellow CES there will be little, if any, difference in perceived SCOAA.

H_6: CES(SCOAA) = CES(SCOAA)

And Hypothesis VII, When the CES compares himself with a RMS there will be a lesser perceived SCOAA.

H_7: CES(SCOAA) $>$ RMS(SCOAA)

Statistic: Univariate and Multivariate Analysis of Variance, Covariance, and Regression.

$\alpha = .05$

These hypotheses will be treated under one discussion. In order to ascertain the necessary data the SCOAA was administered with two sets of directions. On Appendix B the CES was given the following directions: "You are now taking some courses in the compensatory education program which are not college credit courses. Answer the following questions as if you were only taking compensatory level courses." On Appendix C the CES was given the following directions: "You are now taking some courses that are college credit courses. Answer the following questions as if you were only taking college credit courses."

The directions on Appendix B will elicit the mean SCOAA when a CES compares himself with another CES; whereas, Appendix C will elicit the mean SCOAA when a CES compares himself with a RMS.

A white CES perceives himself with a mean SCOAA of 26.77, which is much lower than the mean SCOAA of the black CES (28.99). When a white CES compares himself with another CES the mean SCOAA rises to 28.54 an increase of 1.77; whereas, when the black CES compares himself with another CES he attains a mean SCOAA of 29.58 a rise of .59.

Table 5.24 Mean SCOAA_s, SD_s of Black and White CESs in general SCOAA, mean SCOAA vs.CESs, and mean SCOAA vs.RMSs.

	General SCOAA	SCOAA vs.CESs	SCOAA vs.RMSs
SCOAA			
White (13)	26.77	28.54	26.00
Black (108)	28.99	29.58	28.90
SD			
White (13)	3.47	3.95	2.83
Black (108)	3.02	2.90	3.07

When the white CES student compares himself with a RMS the mean SCOAA decreases .77, with the black CES mean SCOAA decreases but .09.

Table 5.25 indicates that there was a significant difference between mean SCOAA of all CESs when they compared themselves with another CES. This does not hold true when the CES compares himself with a RMS.

Table 5.25 Mean Squared, Univariate F and P less than for CESs.

	Means Squared	Univariate F	P less than
All Groups			
Gen SCOAA vs.CESs	62.5537	25.2865	.0001
Gen SCOAA vs.RMSs	3.3058	1.2165	.2723
Race			
Gen SCOAA vs.CESs	16.0645	6.4939	.0121
Gen SCOAA vs.RMSs	5.3124	1.9549	.1647

When race is considered there is a significant difference of the white CES's perception of his academic ability when he compares himself with another CES. This is not the case for the black CES. When the CES, black or white, compares himself with a RMS there is little difference in SCOAA.

Therefore, Hypothesis VI was rejected for all CESs, but not for the black CES. Hypothesis VII is also rejected for there was no significant difference between mean SCOAA of CESs and when they compared themselves with RMSs.

Hypothesis VIII: The change in SCOAA will be greater for those CESs removed from their environment than for those still embraced within the environment.

Statistic: Univariate and multivariate analysis of variance, covariance and regression.

α= .05

There were 26 black and no white CESs removed from their environment, with 13 white and 81 black CESs who remained within their environment.

Table 5.26 Pre and Post SCOAA and SDs of less by residence and race.

Group	N	Pre SCOAA	SD	Post SCOAA	SD.
white resident	0				
white non resident	13	26.92	2.06	26.77	3.47
black resident	27	28.19	1.80	28.33	3.26
black non resident	81	28.20	2.49	29.21	2.92

The mean SCOAA for all groups changed significantly from the beginning to the end of the compensatory education program. However, the change that took place was equal for both races and resident as well as non-resident CESs. Therefore, Hypothesis VIII is rejected since resident Ss did not make a greater change than non-resident Ss. In fact, it should be pointed out that a larger increase was achieved in mean SCOAA by black non-resident CESs than by any other group.

Table 5.27 Means Squared, Univariate F and P less than for all groups, by race, and by place of residence.

Variable	Means Squared	Univariate F	P less than
all groups			
pre	95256.4050	17846.3029	.0001
change	58.3140	6.4424	.0125
race			
pre	18.7553	3.5138	.0634
change	10.4751	1.1573	.2843
residence			
pre	.0031	.0006	.9809
change	15.1235	1.6708	.1987

Questions

Question 1 "Is the level of SCOAA different for black and white CESs?" can be answered by referring to Table 5.2. In brief, there is a difference in mean SCOAA with black CESs having a higher mean SCOAA than white CESs.

Question 2 "Is the change in level of SCOAA greater among black or white CESs?" can be answered by referring to Table 5.12. This shows that the change in mean SCOAA was significant at the .05 level for all groups, but not significant for race.

Question 3 "Does the level of SCOAA, and change in level of SCOAA, differ among black and white CESs and black and white RMSs?" can also be answered by referring to Table 5.12. It basically points out that the change was equal for both races and for CESs and RMSs.

"Are there any changes in the identified ASOs associated with compensatory education program placement?", question 4, can be answered by referring to Table 5.19. It states that there were no significant changes in ASOs of CESs in the categories of parents, offsprings, relatives, friends, teachers, and spouse. However, there was a significant change in identifying themselves as ASOs. It is interesting to note in Table 5.15 that teachers made a significant change as SOs for CESs. If compensatory education is to achieve its expected success those persons labelled "teachers" must remain important.

A summary of the specific findings follow. For this group:

(1) The change in mean SCOAA of CESs varied from a -.15 change to a .92, with white CESs descending -.15 and blacks ascending .79, and males ascending .92 and females ascending .36. Thus, there was an ascending trend in mean SCOAA for all groups except white, females.

(2) All groups, RMSs and CESs, changed significantly from Test I to Test 2. However, the change equal for CESs and RMSs, as well as males and females.

(3) The SOs identified by the RMSs and the CESs were similar for parents and teachers. The CESs more frequently mentioned offsprings, spouse, and self; whereas, the RMSs identified relatives and friends more frequently. On the post test there was basic agreement on parents, relatives, and friends as being SOs for RMSs and CESs.

(4) There was basic agreement between CESs and RMSs on identifying ASOs in the categories of parents, relatives, friends, and teachers. However, the CESs once again identified offsprings, spouse, and self more often.

(5) There was a significant change in mean SCOAA for both the HACES and LACES. However, the change was not

significant for either group in particular, nor for either race. Thus, each group changed with equal frequency.

(6) When the CES compared himself with another CES he perceived himself to be significantly better. But, when the CES compared himeslf with a RMS he perceived himself to be equal.

(7) Those CESs removed from their environment did not change significantly in mean SCOAA over a year's period. Both the CES resident and the CES non-resident changed equally. However, a much greater change occurred for black non-residents than for any other group.

(8) The mean SCOAA was higher for the black CES than for the white CES. The black RMS also had a higher SCOAA score than his white counterpart.

Discussion of Findings

Although the changes in mean SCOAA were significant for both the CES and the RMS the changes in mean SCOAA for CESs were almost twice as great as for RMSs (.69 to .36). It is interesting to note that both the male and female CES had a higher SCOAA than their white counterparts, and the gains exhibited for the black CESs was also greater than for those white CESs.

Because of the wide age range of the CESs they perceived different SOs and ASOs. This was especially true when one considers the persons noted in the spouse and offspring category. Traditionally, the RMS, especially upon entree into college, is not married. Thus, there would be no reason for the RMS to choose either of these categories.

It is a little more difficult to rationalize the choice of "self" in perceived SOs and ASOs. One could only assume that this is a reaction to the pervasive philosophy of the genaral public. Namely, that the CES is not seen as being "good enough" to make it in college. Thus, this creates within the CES the desire to "show the world" that he has the stuff that it takes to achieve. Therefore, he then creates an intense pride in himself.

When the CES sample was broken down into HACES and LACES, it was felt that because of more one-to-one contacts than the HACES had, that there would be a greater growth in SCOAA. This turned out to be true because at Test I the LACES was significantly lower in mean SCOAA than the HACES. However, by Test 2 the LACES almost reached the HACES in mean SCCAA (28.84 to 28.65).

With the duration of one year in the compensatory education program the CES now perceives himself to be more like a RMS than a CES, contrary to Hypothesis VI and VII. This is shown when one reviews Tables 5.24 to 5.26. At Test 2 the CES has a significantly different impression of himself vs. another CES, and a similar impression of himself vs. a RMS.

There has been much research done on the effect of a poor environment toward education. Thus, it was assumed that removal from a "poor" environment would result in more significant change. However, contrary to Hypothesis VIII, there was no significant change in mean SCOAA between resident and non-resident CESs. Once again it must be noted that there was numerical change in a positive manner for black resident and non-resident CESs but not for the white CESs. The lack of positive change in mean SCOAA for white CESs can be rationalized by stating, as one CES has stated," that compensatory education is a black program, and we don't belong."

When attempting to understand the data within the broader theoretical orientation of this study one must look at the instrument used to assess SCOAA. Since the scores on the Brookover GSCA scales depend upon the individual comparing himself to particular reference groups, change in reference groups could conceivably result in changed SCOAA. Thus, when a S is labelled as a CES and placed in a compensatory education program, his definition of self may develop from a perspective of being in the compensatory education program rather than of the larger school society. And, since his chances of being successful in compensatory education than in the regular college he may have a higher SCOAA. With the time lapse of one academic year, and additional exposure to RMSs, the CES now perceives that he can achieve in the same realm of regular college. He now views the incoming CES as being his "lesser" because he now knows what is expected of him as a RMS. Thus, a more valid utilization of the SCOAA scales is to have the CES compare himself, as was done on Test 2 in Appendices B and C, with specific referents.

Limitations of the Study

Before progressing further it would be beneficial to point out some of the limitations of this study. The limitations imposed by the absence of random selection of RMS make it necessary to state that our findings are not meant as general statements but for this group only.

Although the limited instrument study undertaken in this research resulted in positive findings, it is felt that the SCOAA scale could be made more appropriate for use with CESs without damaging its positive characteristics, Particularly helpful would be adapting the SCOAA scales for use with small groups (between 5 and 15).

A word should be inserted about the size of the N. Some researchers may be concerned that the CES population contains a disproportionate number of blacks (108) to white (13). However, it should be pointed out that if one understands the need for compensatory education it would be assumed that proportionate to need the ratio that exists is true to the total population. Namely, that blacks are more often in need of compensatory education than whites. In addition, and unfortunately as occurs with many studies which extend over a period of time, a portion of the Ss were lost (Pre-149, Post-121). In some instances, particulary with those Ss who withdrew from the compensatory education prior to Test 2, a biasing effect may have been introduced. In the case of the RMS sample, for comparison purposes, the whites were randomly chosen but this was not the case with the blacks. Because of the lack of sophisticated methods of identification, and the legal entanglemants involved, the blacks that were identified by the college admissions office through various methods were all utilized.

A final word concerning the absence of an appropriate RMS control group: while this design is not without controls, it would have been much more comfortable to talk about the findings if such a group had been possible. For this study it was felt that a control group was not necessry and that a comparative group would suffice. In addition, it would have been helpful if the RMS sample was given Appendices A and B so that one could perceive as to whether the same phenomena of referent disparity exists.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

As pilot effort, the purpose of this study was to investigate the effect of compensatory education on selected socially determined intervening variables which may affect the academic growth and performance of CESs. Specifically, this study focuses upon three related problems:

1) Is admission of a student into a compensatory education program accompanied by social influences (intervening variables) which are generally negative and strong enough to counteract the benefits of the supposedly more ideal educational setting?
2) Will success in a compensatory education program predict a likelihood of that student achieving a college degree?
3) Does peer group companionship of the individual, involved in compensatory education have any bearing upon the individual's success?

Subsumed under this general problem are the more specific research problems. These are:

1) What happens to the self-concept-of-academic ability of students engaged in a compensatory education program?
2) Who are the significant and academic others of CESs?
3) Is the change in self-concept-of-academic ability similar for regularly enrolled Ss, as it is for CESs?
4) Do CESs perceive the same SOs and ASOs as RMSs?

Answers to these problems were sought by testing the following theoretically derived hypotheses:

Hypothesis I. The SCOAA of CESs will be characterized by an ascending trend from Test I to Test 2.
Hypothesis II. The changes in SCOAA of CESs will be greater than those of RMSs.
Hypothesis III. Those named as SOs by the CESs do not differ from those named by RMSs.
Hypothesis IV. Those named as ASOs by the CESs do not differ from those named by RMSs.
Hypothesis V. The change in SCOAA is greater among those LACESs than among those HACESs.

Hypothesis VI. When the CES compares himself with a fellow CES there will be little, if any, difference in perceived SCOAA.
Hypothesis VII. When a CES compares himself with a RMS there will be a lesser perceived SCOAA.
Hypothesis VIII. The change in SCOAA will be greater for those CESs removed from their environment than for those still embraced within the environment.

In addition to the aforementioned hypotheses a number of questions are also investigated. These are:

Question 1). Is the level of SCOAA different for black and white CESs?
Question 2). Is the change in level of SCOAA greater among black and white CESs?
Question 3). Does the level of SCOAA and change in level of SCOAA differ among the black and white CESs and black and white RMSs?
Question 4). Are there any changes in the identified ASOs associated with compensatory education program placement?

The subjects of this study were male and female Ss from a specific geographic area (by OEO standards classified as disadvantaged), who were selected to participate in a compensatory education program during the 1968-1969 school year. In addition, a comparative group of Ss of females and males from throughout the state of New York, and entering college for the first time, were randomly selected from the freshman class of 1969-1969 in an Eastern State University College.

By racial composition, the CESs consisted of blacks and whites; whereas, the RMSs group was composed of blacks and whites. In the case of the CESs, the admissions office of the compensatory education program designated eligibility according to past academic performance, geographical residence, motivation for extended education and potential success in college work. The admissions office of the regular college chose students upon part academic performance (high school average, and intensity of high school course preparation), scores on standardized tests and by personal interview.

In a time series design, two observations were made on the same subjects prior to their enrollment as a CES or a RMS through their first year, The instruments used were developed by Wilbur Brookover and his associates, and adapted for use with RMSs and CESs by the author, in this study to test the Brookover social-psychological theory of learning. They are: general SCOAA scale, SOs test , and ASOs test. In addition, the author also developed a specific SCOAA scale so that CESs could compare themselves with other CESs and RMSs. The resulting data were analyzed by using (1) a test for change in SCOAA involving repeated measures on the same subjects; (2) an analysis of variance with planned orthogonal comparisons with unequal subclass frequencies by lease squares; and (3) graphic comparisons.

Specific findings were:

1) There was an ascending trend in mean SCOAA for the CESs of .69 over a one year period. However, when the variable of race was considered Hypothesis I held true for blacks but not for whites. When the variable of sex is taken into consideration both sexes had an ascending SCOAA score. A more careful analysis of the data indicates that the white female is responsible for the descending SCOAA score of the whites.
2) All groups, CESs and RMSs, changed in mean SCOAA. However, the change was equal for CESs and RMSs, as well as for males and females.
3) With the exceptions of offsprings, spouse, and self, the CESs and the RMSs did not differ in their identification of SOs.
4) CESs and RMSs did not differ on the identification of parents, friends, relatives, and teachers as ASOs. However, there was a significant difference in the identification of spouse, offsprings, and self- all identified by the CES but not by the RMS.
5) There was a significant change in mean SCOAA for both the HACESs and the LACESs groups. However, each group changed with equal frequency.
6) The CES perceived himself to be higher in mean SCOAA when he compared himself with another CES.
7) When the CES compared himself with a RMS the mean SCOAA was about equal. Thus, the CES, at the post test situation perceived himself to be equal in SCOAA to his RMS counterpart.

8) There was no significant change in mean SCOAA between those CESs considered "resident" and those considered "non-resident." Therefore, change in environment did not have an effect on mean SCOAA of the CES.
9) In both tests the mean SCOAA was higher for blacks than for whites.
10) The change in mean SCOAA is significant for both white and black CESs. But, when race is considered blacks changed as frequently as whites.
11) There was no change in ASO of CESs in the categories of parents, offsprings, relatives, friends, teachers, and spouse. There was a significant change in the CES identifying the self as being more significant ASO.

Conclusions

On the basis of the above summarized findings which resulted from testing the seven null hypotheses and four questions found in Chapter V the following conclusions are made. Generalizations beyond this specific population under study is not intended.

If the CES's SCOAA does rise as a result of a compensatory education program, does academic achievement rise likewise as would be expected from Brookover's work with regular grade students?

1) The SCOAA scores of CESs exhibit an ascending trend over their year in the compensatory education program.
2) At the $\alpha=.05$ level all groups, RMSs and CESs, demonstrated a positive change in mean SCOAA. This does not hold true when each group is considered individual- both changed with equal frequency.
3) At the $\alpha=.05$ level teachers, offsprings, and self for CESs made significant changes as SOs. The categories of parents, relatives, friends, and spouse remained the same. It should be noted that RMSs did not choose offsprings, spouse or self as being SOs on either test.
4) At the $\alpha=.05$ level only self was more frequently identified as an ASO by the CESs. The remaining groups of parents, offsprings, relatives, friends, teachers, and spouse remained the same. However, the CES have a numerical change on the post test of 5 percent whereas, the RMS had a negative change of 6 percent on the post test in the category of teacher.

5) At the $\alpha = .05$ level all groups (HACES and LACES) had a significant change in mean SCOAA. When level was considered independently the HACES changed as frequently as LACES.

6) At the $\alpha = .05$ level the CES perceives himself higher on the SCOAA scale when he compares himself with another CES at the post test situation.

7) At the $\alpha = .05$ level the CES perceives himself to be equal in mean SCOAA when he compares himself with a RMS at the post test situation.

8) At the $\alpha = .05$ level all groups (resident-non-resident) changed in mean SCOAA. However, there is no significant difference when residents and non-residents are considered independently.

9) The level of mean SCOAA scores differ for black and white CESs-black students being higher than their white counterparts on both the pre and post test.

10) At the $\alpha = .05$ level the change is greater from the pre to the post test for both black and white CESs. However, when race is considered separately blacks change as frequently as whites as a result of compensatory education.

11) There is no change at the $\alpha = .05$ level when the CES identifies ASOs in the areas of parents, offsprings, relatives, friends, teachers, and spouse. At the $\alpha = .05$ level there is a significant change in "self" as an ASC as a result of compensatory education.

Implications for Research

The expected rise in mean SCOAA resulting from being labeled a CES and placed in a compensatory education program demands explanation. Furthermore, extended research is needed to test whether the ascending trend in SCOAA is merely a brief cycle, perpetuated as a result of an intensive compensatory education program, or does it have a lasting effect throughout the remaining years as a RMS.

If the SCOAA of the CES does rise as a result of this compensatory education program, does the academic achievement of the CES rise likewise as would be expected from Brookover's work with regular class students. If the SCOAA does exhibit an association with the CES's academic achievement, steps can be taken to examine various ways of manipulating it to improve academic accomplishment. This is especially true in light of the similarity between CES SOs and ASOs, and RMS SOs and ASOs. It would be worthwhile to replicate Brookover's experiment wherein SCOAA and, thereby academic achievement were manipulated with SOs. The CES has particularly identified members of their immediate family, such as spouse and offsprings, as well as self, as the SOs to be utilized in experimentation.

Assuming that SOs are antecedents of SCOAA, changes in their actions and attitudes toward the CES as a student should be studied as sources for changes in SCOAA trends and academic achievement. And, the perception of others should be studied to specify more exactly their relative importance as sources of the CES's self-definition as a student.

Prior to conducting further studies on the CES of the nature described previously it would be most helpful to revise the existing scale for use with small groups of CESs. Extensive validity and reliability studies should be conducted similar to those performed when adapting the SCOAA scale for use with blind and deaf Ss.[1] Finn suggests that in analyzing the data the 3 item on the SCOAA scale be eliminated. However, particular pains should be undertaken to insure comparability with the existing Brookover scales.

Furthermore, additional research should be undertaken to see if the CES, now former CES, compares himself favorably with RMSs and as to whether the CES continues to compare himself as being "better" than the currently enrolled CESs.

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[1] Lee M. Joiner, "The Reliability and Construct Validity of Self-Concept of Academic Achievement-Form D for Hearing Impaired Students," unpublished Ph.d. dissertation, Michigan State University, 1966. And Edsel Erickson, "Scales and Procedures for Assessing Social Psychological Characteristics of Visually Impaired and Hearing Impaired Students," 1967.

Implications for Theory

This research, by studying the consequences of compensatory education placement on certain socially mediated social psychological constructs, like SCOAA, and referent SCOAA, emphasizes the social consequences of being labeled as a CES. In particular, findings regarding the SCOAA patterns associated with compensatory education placement suggests the need for greater insight in peculiar definitions underprivileged, disadvantaged, expectations concerning CES school behavior, and conceptions of the CES and the compensatory education program.

For those working particularly with the SCOAA scale, this research suggests the need for a more exact description of the referent perspective from which self statements are made-whether it be among other CESs, RMSs, SOs or ASOs. This study also raises the question as to whether comparisons can be made between SCOAA levels having different referent antecedents. In addition, it underlines the possibility that the SCOAA's predictive and explanatory powers may be meaningful only within the carefully delineated referent parameters. For example, "unrealistically high" CES's self statements may be quite realistic from a CES referent perspective but not from a RMS referent perspective. Also, SCOAA's function as an intervening variable affecting academic achievement may possibly be understood only within the CES referent parameters and not in comparison with RMS's self statements.

Implications for Education

While this research, by virtue of its pilot nature, is far from definitive, hopefully, it draws attention to the larger social context within which the need for a compensatory education program occurs. Therefore, instead of viewing the antecedents of learning within the CES, attention should be paid to the influence of SOs and ASOs as they convey definitions and expectations to the CES through interaction with them. Furthermore, how the CES perceives such definitions and how they act upon their perceptions become a point of concern. Even the possibility of enhancing academic achievement for CESs by modifying interaction and others should definitely be considered.

Specifically, this research has made it explicit that as the CES proceeds the teacher becomes more important. The CES is not concerned with the race of the instructor, as many would insist, but the competency and quality of the instuction.

Also, for many years, educators have known that being labeled "disadvantaged" in one place is not the same thing as being labeled "disadvantaged" in another place-that a S might be "disadvantaged", and thus eligible for a compensatory education program, in one place but not in another. They have also known that what the CES is expected to do varies from place to place and time to time. And, probably what it means to be in a compensatory education program depends on a large extent on the definitions and attitudes which exist in that particular community and school.

What is needed in the future is an intensive study of some different kinds of schools and communities. A study should be undertaken at making the following more explicit: how does the need for compensatory education all begin; what is the mechanism of labelling an S as a CES and how does it work; who makes decisions as to whether the S should be a CES or a RMS; on what criteria do they make this decision; what is the function of teachers, parents etc. in perpetuating or thwarting the need for compensatory education; how is the CES expected to behave; and how are others expected to behave to the CES. Then we would have a better idea of what a CES is, how he got that way in the first place, and what can best be done to eliminate the need for compensatory education.

Finally, it must be emphasized that the most valuable source of information is the CES himself. We must find better ways of asking them, and, especially, listening to them.

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Appendix E

There are many people who are concerned about how well young people do in school. Who are the people you feel are concerned about how well you do in school.

Look at the list below. If you feel that your parents are important mark the first (1) space of number 32, if your children are important mark the first (1) space of 33, and so on for numbers 34-38. If the group is not important leave the number of the question blank.

32. parents (mother or father, step-father or step-mother)

33. children

34. relatives (aunts, uncles, etc.)

35. friends

36. teachers

37 wife or husband

38. yourself

Appendix D

There are many people who are important in our lives. Who are the people who you feel are important in YOUR life.

Look at the list below. If you feel that your parents are important mark the (1) space of number 25, if your children are important mark the first (1) space of 26, and so on for numbers 27-31. If the group is not important to you leave the number of the question blank.

25. parents (mother, or father, step-father or step-mother)

26. children

27. relatives (aunts, uncles, etc.)

28. friends

29. teachers

30. wife or husband

31. yourself

Appendix A

1. How do you rate yourself in school ability compared with your close friends?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

2. How do you rate yourself in school ability compared with those in your class at school?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

3. How do you think you ranked in your high school graduating class?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

4. Do you think you have the ability to complete college?

    1. No
    2. Probably not
    3. Not sure either way
    4. Yes, probably
    5. Yes, definitely

5. Where do you think you would rank in your class in college?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

6. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?

    1. Most unlikely
    2. Unlikely
    3. Not sure either way
    4. Somewhat likely
    5. Very likely

7. Forget for the moment how others grade your work. In your own opinion how good do you think your work is?

    1. Much below average
    2. Below average
    3. Average
    4. Good
    5. Excellent

8. What kind of grades do you think you are capable of getting?

    1. Mostly F's
    2. Mostly D's
    3. Mostly C's
    4. Mostly B's
    5. Mostly A's

Appendix B

DIRECTIONS: (Read carefully)

You are now taking some courses in the SEEK Program which are not college level courses. (Use only one answer per question)

9. How do you rate yourself in school ability compared with your close friends?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

10. How do you rate yourself in school ability compared with those in you class at school?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

11. How do you think you ranked in you high school graduating class?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

12. Do you think you have the ability to complete college?

    1. No
    2. Probably not
    3. Not sure either way
    4. Yes, probably
    5. Yes, definitely

13. Where do you think you would rank in your class in college?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

14. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?

    1. Most unlikely
    2. Unlikely
    3. Not sure either way
    4. Somewhat likely
    5. Very likely

15. Forget for a moment how others grade your work. In your own opinion how good do you think your work is?

    1. Much below average
    2. Below average
    3. Average
    4. Good
    5. Excellent

16. What kinds of grades do you think you are capable of getting?

    1. Mostly F's
    2. Mostly D's
    3. Mostly C's
    4. Mostly B's
    5. Mostly A's

Appendix C

DIRECTIONS: (read carefully)

You are now taking some courses that are college credit courses. Answer the following questions as if you were only taking college level courses. (Use only one answer per question)

17. How do you rate yourself in school ability compared with your close friends?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

18. How do you rate yourself in school ability compared with those in your class at school?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

19. How do you think you ranked in your high school graduating class?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

20. Do you think you have the ability to complete college?

    1. No
    2. Probably not
    3. Not sure either way
    4. Yes,probably
    5. Yes, definitely

21. Where do you think you would rank in your class in college?

    1. Poorest
    2. Below average
    3. Average
    4. Above average
    5. The best

22. In order to become a doctor, lawyer, or a university professor, work beyond four years of college is necessary. How likely do you think it is that you could complete such advanced work?

    1. Most unlikely
    2. Unlikely
    3. Not sure either way
    4. Somewhat likely
    5. Very likely

23. Forget for a moment how others grade your work. In your own opinion how good do you think your work is?

    1. Much below average
    2. Below average
    3. Average
    4. Good
    4. Excellent

24. What kind of grades do you think you are capable of getting?

    1. Mostly F's
    2. Mostly D's
    3. Mostly C's
    4. Mostly B's
    5. Mostly A's

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